

Annotated checklist of *Rubus* L. (Rosaceae) from South America

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Abstract

The diversity of *Rubus* in South America is much understudied and a taxonomic framework needs to be established as a basis for future revisionary and phylogenetic work. Our review identified 110 names based on South American specimens which were published since 1767. Each name was then classified according to its botanical description and type material. Additionally, where necessary, we suggest appropriate lecto-, neo-, or epitypes. A comprehensive list of synonyms is provided and representative herbarium specimens for each country are cited to tentatively document geographical range. In total, we accept 46 species of *Rubus* recorded across South America, propose 19 new synonyms, restore *R. organensis*, previously a synonym of *R. brasiliensis*, provide a replacement name for the latter, and include new country records of *R. azuayensis*, *R. laegaardii* and *R. rusbyi*. This checklist serves as an essential starting point for future monographic and evolutionary studies on *Rubus* in South America.

Key words: Amazonia, Andes, Rubeae, synonymy, taxonomy, typification

Introduction

Rubus L. is the most diverse genus in Rosaceae, with ca 900–1500 species distributed worldwide (Focke 1910, 1911b, 1914; Christenhusz and Byng 2016; Huang et al. 2023; POWO 2024). The genus is believed to have originated in North America and then colonized Eurasia, Central and South America during the Miocene, ultimately reaching Oceania through long-distance dispersal (Carter et al. 2019). However, its species-level taxonomy is challenging due to morphological diversity, hybridization, polyploidy and apomixis (Sochor et al. 2022). Recent molecular studies have helped to identify the major clades in *Rubus* and revise the infrageneric classification of the genus (Carter et al. 2019; Huang et al. 2023), but South American *Rubus*, particularly Andean species, are underrepresented in these studies.

South American species were until recently classified in three subgenera: *R.* subg. *Rubus*, *R.* subg. *Comaroposis* (Rich. ex Nestl.) Focke, and *R.* subg. *Orobatus* (Focke) Focke (Romoleroux 1996; Carter et al. 2019; Espinel-Ortiz and Romoleroux 2021), but according to Huang et al. (2023), all the South American species fall into *Rubus* subg. *Rubus*. Overall, the taxonomy and systematics of *Rubus* in South America on a larger scale is not well documented. Most of the



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recent literature has focused on limited geographical areas (e.g., countries, departments, provinces or regions) when describing new species (Moreno-Medina et al. 2020; Espinel-Ortiz and Romoleroux 2021), reporting introduced or re-discovered taxa (Espinel-Ortiz and Romoleroux 2020; Espinel-Ortiz et al. 2023), and catalogs or revisions (Forzza et al. 2010; Romoleroux et al. 2014; IPNI 2024; POWO 2024; Tropicos.org 2024). Only two historical studies cover this taxon on a global scale: The first one is the multivolume monograph of *Rubus* by Focke (1910, 1911b, 1914), which was a reference for the genus diversity worldwide, but is outdated by now, not least due to the plethora of names published in the past 100 years. The second study is a recent compilation of *Rubus* taxa considered as distinct (Huang et al. 2023), which unfortunately omits recently described or rediscovered species and neither lists synonyms nor taxonomic types. Both studies represent important milestones towards a comprehensive taxonomic treatment of the genus, but are only of limited use for future work on the South American species.

There is no recent publication summarizing taxonomic diversity and nomenclature of *Rubus* in South America, especially with the recent additions, nor are many of the names effectively typified. The present study aims at a) clarifying the names of *Rubus* in South America, to identify types and tentatively assign synonyms, b) providing a clear starting point for future revisionary, monographic and phylogenetic work on the genus in South America. To this end, we compiled a critical taxonomic checklist of the genus in South America, which includes all the published names in *Rubus* based on South American specimens, their taxonomic identity and typification, as well as the species distribution ranges as currently understood.

Material and methods

We compiled the names of South American *Rubus* mentioned in the taxonomic literature (Macbride 1930; Fuks 1984; Romoleroux 1996; Romoleroux et al. 2014; IPNI 2024; POWO 2024; Tropicos.org 2024), tracing back each original publication with the help of the Biodiversity Heritage Library (<https://www.biodiversitylibrary.org/>). Across sources, we reviewed all the names where South America (e.g., “*America australis*”), or countries of South America were mentioned, either to search for type material and representative specimens for the distribution assessment.

We have personally checked the collections of *Rubus* of the following South American herbaria: CPUN, CUZ, HA, HUT, HUTI, LOJA, MA, Q, QAP, QCA, QCNE, QPLS, USM, and digitized material from: A, AAU, ASU, B, BM, BR, COL, CORD, E, F, FURB, G, GH, GOET, HAL, K, L, LD, LINN, M, MBM, MICH, MO, MPU, NY, P, PH, PRC, PUL, S, SPF, TEX, U, US, W, WU, Z. All the acronyms cited here followed those registered in Index Herbariorum (Thiers 2024).

Each species in this checklist has at least one cited specimen per country in South America, and notes on the typification and synonymy are provided where required. Herbarium acronyms are followed by a barcode, when available. Furthermore, some specimens (e.g., D. Espinel-Ortiz & H.G. Abad 281) were mounted on more than one herbarium sheet, and/or have additional dry or alcohol material, each one with its own herbarium barcode. For such spec-

imens, we provide all the herbarium barcodes for each part when available. We have only included the herbarium specimens that we were able to revise; therefore, we do not provide information on their duplicates that we were unable to examine, unless they are considered as types, original or possible original material.

All the proposed nomenclatural actions in this checklist are based on the International Code of Nomenclature for algae, fungi, and plants (Turland et al. 2018), hereafter referred to as ICN. We include designations (names not validly published) inside quotation marks in the synonymy where appropriate. Citations of types, original material, and possible original material include an exclamation mark if the material has been seen personally, [image!] when checked from digitalized material, or (n.v.) when not seen. Within the taxon citation, we cited all the syntypes if a lectotype is designated among the extant syntypes. Additionally, \equiv is used for homotypic synonyms and $=$ for heterotypic synonyms. The specimens cited in the distribution section are organized geographically by country from North to South and West to East. In taxonomic notes, we include information about synonymy; we also added “syn. nov.” to each name treated here as a new synonym. A list of the accepted species, the compiled names/designations and the type specimens are provided as supplementary material (See Suppl. material 1).

Checklist of the South American *Rubus* species

1. *Rubus acanthophyllos* Focke, Abh. Naturwiss. Vereins Bremen 4:161. 1874.

$=$ *Rubus jelskii* Fritsch in Szyszyl., Diss. Cl. Math.-Phys. Acad. Litt. Cracov. 29: 220. 1894. • Type. PERU. Cajamarca: Cutervo, May 1879, C. de Jelski 6 (lectotype, designated by Romoleroux 1996, pg. 10: B-10-0278049 [image!]).

Type. VENEZUELA. Mérida: Sep 1846 (fl), N. Funck & L.J. Schlim 1142 (holotype: LE-00018277 [image!]; isotype: P-00682371 [image!]).

Nomenclature notes. In the protologue, Focke (1874) cited a specimen at LE, which we recognize as the holotype of *R. acanthophyllos* according to Art. 9.1 of the ICN. Additionally, we found a duplicate kept at P, which we recognize as an isotype of *R. acanthophyllos*.

Taxonomic notes. The synonymy follows the revision of Romoleroux (1996).

Specimens examined. COLOMBIA. • **Boyacá:** Municipio Duitama, El Carmen, vía a Virolín, 3400–3500 m, 19 Nov 1994 (fl), J. Betancur 5634 (COL-000057912). • **Unknown:** El Boquerón bei Bogotá, páramos, 3200–3700 m, Jul 1929 (fl), C. Troll 3774 (B-10-0248179). VENEZUELA. • **Trujillo:** Parque Nacional Guaramacal, 09°16.700'N, 70°08.650'W, 2700–2800 m, Jan–Feb 1996 (fl), B. Stergios & L. Zambrano 17746 (US-00603198). ECUADOR. • **Loja:** Desvío a Fierro Urcu, aprox. 9 km desde la carretera E35, 03°42.842'S, 79°18.642'W, 3449 m, 14 Nov 2019 (fl, fr), D. Espinel-Ortiz & E. Bastidas-León 193 (QCA-244943, QCA-7010888). PERU. • **Cajamarca:** Hualgayoc, 06°45.680'S, 78°36.018'W, 3523 m, 27 May 2014 (fr), J. Montoya, E. Linares & A. Galán 3755 (USM-298275).

Distribution. *Rubus acanthophyllos* is recorded along the Andes of Venezuela, Colombia, southern Ecuador and Peru.

2. *Rubus adenothallus* Focke in Herzog, Meded. Rijks-Herb. 19: 56. 1913.

Type. **BOLIVIA.** Río Sanjana, near Calacheca, 3500 m, Jan 1911 (fl), *T. Herzog* 2399 (lectotype, designated by Romoleroux 1996, pg. 31: L-0019722 [image!], L-0019723 [image!]).

Specimens examined. **ECUADOR.** • **Azuay:** Vía Cuenca-Loja, desvío en la carretera E35, entrada a la comunidad “Rañas”, aprox. 37 km después de Cumbe, 03°15.213'S, 79°04.132'W, 3198 m, 13 Nov 2019 (fl, fr), *D. Espinel-Ortiz & E. Bastidas-León* 187 (QCA-246116, QCA-7011142). **PERU.** • **Cusco:** Calca, Lares, 10 km antes del pueblo del Lares y cinco km más allá, 3200–3500 m, 30 Aug 1943 (fl, fr), *C. Vargas* 3585 p.p. (CUZ-3991). • **San Martín:** Mariscal Cáceres, lado S de Río Chochos, Río Abiseo Parque Nacional, 3400 m, 07 Jun 1986 (fr), *K. Young* 3717 (CPUN-4977). **BOLIVIA.** • **La Paz:** Inquisivi, “Aguas Calientes de Calachaca”, 9 km NW of Choquetanga, 16°48.000'S, 67°19.000'W, 3400–3500 m, 09 Mar 1991 (fl), *M. Lewis* 38259 (MO-1606899).

Distribution. *Rubus adenothallus* is recorded in the Andes of southern Ecuador, Peru and Bolivia.

3. *Rubus adenotrichos* Schltdl., Linnaea 13(2): 267. 1839.

= *Rubus roseorum* A.Berger, J. Wash. Acad. Sci. 16(6): 161. 1926. • **Type.** **ECUADOR. [Pichincha]:** Vicinity of Quito 26 Oct–01 Nov 1918 (fl, fr), *J.N. Rose & G. Rose* 23548 (holotype: US-00095484 [image!]; isotypes: GH-40522 [image!], NY-429652 [image!]).

Type. **MEXICO.** Jalapa, May 1829 (fl), *C.J.W. Schiede* s.n. (lectotype, designated here: HAL-60490 [image!]).

Nomenclature notes. There are some problems with the typification of *R. adenotrichos*, because the holotype was cited at different herbaria. Romoleroux (1996) cited a specimen from NY, while Tropicos.org (2024) cited specimens from G. However, neither matches the date cited in the protologue. Schlechtendal (1839) described *R. adenotrichos* from a specimen collected by Schiede in Jalapa in May. No herbarium is given in the protologue, but Schlechtendal was the director of the Botanical Garden of the Martin Luther University of Halle-Wittenberg (HAL) at the time of the description. Therefore, the original material examined by Schlechtendal is housed at HAL (Braun and Wittig 2003).

We located two specimens of *R. adenotrichos* collected by Schiede at HAL. HAL-60490 has a handwritten label which matches the protologue in locality, date of collection and flower color. The other specimen at HAL, as well as those at GOET, NY and P have only a handwritten label with the locality. It is clear that Schlechtendal used more than HAL-60490 for his description of *R. adenotrichos*. Thus, according to Art. 9.3, 9.11, and 9.12 of the ICN, lectotypification is required and we designate HAL-60490 as the lectotype of this name. Further specimens from Schiede are cited here as original material of *R. adenotrichos*.

Taxonomic notes. The synonymy follows the revision of Romoleroux (1996).

Original material of *Rubus adenotrichos* Schltdl.: MEXICO. Jalapa, C.J.W. Schiede s.n. (HAL-107628 [image!], two sheets).

Possible original material of *Rubus adenotrichos* Schltdl.: MEXICO. Jalapa, C.J.W. Schiede s.n. (GOET-010090 [image!], NY-429609 [image!], P-00682372 [image!]).

Specimens examined. VENEZUELA. • **Trujillo:** Boconó, Parque Nacional Guarmacal, casa Vicuyal, 2100 m, 12 Apr 2003 (fl), B. Stergios, L.J. Dorr, S.M. Niño & R. Caracas 20169 (US-00728400). **COLOMBIA.** • **Putumayo:** Valle de Sibundoy, 1.5 km S Sibundoy, 2200 m, 21 Sep 1963 (fl), M.L. Bristol 1397 (COL-00197822). **ECUADOR.** • **Imbabura:** Cotacachi, vía a la laguna de Cuicocha, entrando por la carretera Cotacachi-Quiroga-Cuicocha, 00°17.563'N, 78°20.918'W, 3045 m, 03 Oct 2020 (fl), D. Espinel-Ortiz, M.P. Ortiz, M.A. Espinel-Ortiz & C. Castillo 246 (QCA-246116, QCA-7011142). • **Pichincha:** Chillo Valley, Santa Rosa, 9600 ft, 26 Aug–02 Sep 1923 (fl), H.E. Anthony & G.H.H. Tate 204 (US-03733224); Nono, Aug 1899 (fl), A. Sodiro 408 (Q-3608). **PERU.** • **Huánuco:** Huánuco, San Pedro de Cani, 3088 m, 18 Jun 2017 (fl), J.C. Tumbay 17 (USM-312932).

Distribution. *Rubus adenotrichos* is reported from Mexico through Central America to the Central Andes, along the Andean Cordillera of Venezuela, Colombia, Ecuador and central Peru.

4. *Rubus alutaceus* B.L. Moreno, Casierra & Albesiano, Revista Brasil. Fruticult. 42(2)-e542: 3. 2020.

Type. COLOMBIA. Boyacá: Municipality of Gachantivá, El Carmen Farm, 2504 m, 31 Mar 2017, B. Moreno 2 (holotype: COL (n.v.)).

Notes. This species is known only from the holotype.

Distribution. *Rubus alutaceus* is only known from the type locality in the Cordillera Oriental of central Colombia.

5. *Rubus azuayensis* Romol., Fl. Ecuador 56: 9. 1996.

Type. ECUADOR. Azuay: The eastern Cordillera, 4–6 km, north of the village of Sevilla de Oro, 9000–1000 ft, 14 Aug 1945 (fl, fr), W.H. Camp E-4693 (holotype: NY-39569 [image!]; isotypes: BM-000622366 [image!], US-00478811 [image!], US-01013533 [image!]).

Specimens examined. ECUADOR. • **Loja:** Desvío a Fierro Urcu, aprox. 5.2 km desde la carretera E35, 03°41.871'S, 79°18.257'W, 3204 m, 21 Feb 2017 (fr), D. Espinel-Ortiz, E. Bastidas-León, K. Romoleroux & M. Hidalgo 101 (QCA-243563). **PERU.** • **Cajamarca:** Santa Cruz, Pulán, Cerro Campanario, alrededores de la Catarata La Cuda, 3100 m, 03 Jul 2004, G. Iberico Vela, L. Dávila & A. Chávez Santa Cruz 752 (CPUN-23094).

Distribution. *Rubus azuayensis* is known in southern Ecuador and northern Peru. We report here for the first time the presence of *R. azuayensis* in Peru.

6. *Rubus bogotensis* Kunth, Nov. Gen. Sp. [H.B.K.] 6[Quarto]: 220. 1823.

≡ “*Rubus bogotensis* var. *normalis* Kuntze”, Revis. Gen. Pl. 3[3]: 78. 1898, nom. inval.

= *Rubus adenomallus* Sodiro ex Focke, Biblioth. Bot. 18, Heft 83: 52. 1914, syn. nov. • Type. Ecuador. [Pichincha]: “Crescit prope Nono” [grows near Nono], 1887 (fr), A. Sodiro 408 (lectotype, designated here: Q-3605!).

Type. COLOMBIA. Santa Fé de Bogotá, “1370 hex”, Sep (fr), A. von Humboldt & M.A. Bonpland s.n. (lectotype, designated by Romoleroux 1996, pg. 36: P-00679380 [image!]).

Nomenclature notes. Romoleroux (1996) cited the lectotype of *R. bogotensis* in P, but we found two separate sheets at P that agreed with this typification. We cite here the barcode of the lectotype selected by Romoleroux, as only one specimen was used for the typification. The lectotype has a label from the “Herbier Humboldt & Bonpland” and a separate, handwritten label from Kunth with the species identification and locality. As it lacks a collection number, the second specimen at P without such labels is treated here as original material. Focke (1914) described *R. adenomallus* based on Sodiro 408, which was annotated “*Rubus fulliginosus* Sodiro” by the collector. We were unable to locate this specimen at B, but we found a collection at Q that matches the original description. Moreover, the specimen at Q has a previous handwritten annotation as “*Rubus fulliginosus* Sodiro”, the same that is mentioned in the protologue. Therefore, according to Art. 9.3, 9.11 and 9.12 of the ICN, we designate it as the lectotype of *R. adenomallus*. Kuntze (1898) used “*R. bogotensis* var. *normalis*” when referring to the typical form of *R. bogotensis* automatically including its type. According to Art. 24.3 of the ICN, “*R. bogotensis* var. *normalis*” is an invalid name because its final epithet is different from the corresponding higher-ranked taxon.

Taxonomic notes. *Rubus adenomallus* is considered to be a new synonym of *R. bogotensis* because its type collection has the same trifoliate leaves, glandular trichomes and fruits (few and big drupelets) as *R. bogotensis*.

Original material of *Rubus bogotensis* Kunth: COLOMBIA. Santa Fé de Bogotá, A. von Humboldt & M.A. Bonpland s.n. (P-00162113 [image!]).

Specimens examined. VENEZUELA. • **Trujillo:** Trujillo, alrededores de Guirigay, 3200 m, Aug 1958 (fl), L. Aristeguieta 3540 (US-00727722). **COLOMBIA.** • **Cundamarca:** Cordillera Oriental, páramo de Guasca, 2800–3300 m, 17 Feb 1951 (fl), H. García-Barriga & R.E. Schultes 13504 (COL-000197256, US-03733321). **ECUADOR.** • **Loja:** San Lucas, desvío a Lomas de Oro, aprox. 5 km desde la carretera E35, 03°40.938'S, 79°14.897'W, 3212 m, 14 Nov 2019 (fl, fr), D. Espinel-Ortiz & E. Bastidas-León 191 (QCA-246056, QCA-7011098 to QCA-7011100). **PERU.** • **Junín:** Tarma, Huasahuasi, carretera Cachiyazu-Cascas, 11°10.000'S, 75°35.617'W, 3852 m, 20 May 2021 (fl), R. Vásquez, R. Rojas & E. Pinche 45877 (USM-330175). **BOLIVIA.** • **La Paz:** Inquisivi, “Jucumarini Trail”, between Chichipata and Jucumarini, 16°58.000'S, 67°13.000'W, 3300–3400 m, 23 Feb 1990 (fr), M. Lewis 37125 (US-03733297).

Distribution. *Rubus bogotensis* is recorded along the Andes of Venezuela, Colombia, Ecuador, Peru and Bolivia.

7. *Rubus boliviensis* Focke, Abh. Naturwiss. Vereins Bremen 4: 158. 1874.

- = *Rubus chagalensis* Hieron., Bot. Jahrb. Syst. 20(3, Beibl. 49): 28. 1895. • Type. ECUADOR. Azuay: Chagal, Western Andes of Cuenca, 2000–2600 m, Oct (fl), F.C. Lehman 4969 (lectotype, designated by Romoleroux 1996, pg. 46: F-V0068374F [image!]; isolectotype: K-000424913 [image!]).
- = *Rubus herzogii* Focke in Herzog, Meded. Rijks-Herb. 19: 56. 1913, syn. nov.
≡ *Rubus briareus* subsp. *herzogii* (Focke) Focke, Biblioth. Bot. 18, Heft 83: 56. 1914. • Type. BOLIVIA. Saimapata, 2000 m, Mar 1911 (fl), T. Herzog 1663 (lectotype, designated here: L-0019779 [image!]).

Type. BOLIVIA. [La-Paz]: Larecaja “viciniis Soratam, ad rivum Challasuyo” [near Sorata, at the river Challasuyo], 2600 m, Aug 1857 (fl, fr), G. Mandon 676 (lectotype, designated by Romoleroux 1996, pg. 46: W-65297 [image!]; isolectotype: K-000424914 [image!]).

Nomenclature notes. Romoleroux (1996) cited the holotype of *R. chagalensis* in F, but we found another sheet from this collection in K. While Hieronymus (1895) cited *Lehman 4969* in the protologue, he omitted the herbarium that held this specimen. According to Art. 9.3 of the ICN, as no clear holotype was selected and two sheets in different herbaria are extant, lectotypification is required. In this respect, Romoleroux (1996) effectively typified the name *R. chagalensis* at that time (Art. 7.11). We correct the type status to lectotype and add the corresponding barcode. Focke (Herzog 1913) described *R. herzogii* based on two specimens: *Herzog 1663* and *Buchtien s.n.* We located *Herzog 1663* in L, and according to Arts. 9.3, 9.11 and 9.12, we designate it as the lectotype of this name. We did not locate *Buchtien s.n.*, but instead we found *Buchtien 6176*, which has the same locality information as given in the protologue. We treat this specimen as possible original material of *R. herzogii*, because we lack evidence that Focke had access to it at the time of the description.

Taxonomic notes. We follow the revision of Romoleroux (1996), who recognized *R. chagalensis* as a synonym of *R. boliviensis*. Furthermore, we consider *R. herzogii* as a new synonym of *R. boliviensis* based on the same indumentum, especially in branches and leaves; as well as the stipules and fruits seen in the type collections.

Possible original material of *Rubus herzogii* Focke: BOLIVIA. Cotaña, 2500 m, Nov 1911 (fr), O. Buchtien 6176 (US-00641886 [image!]).

Specimens examined. ECUADOR. • Loja: 12–20 km S de Yangana, 04°26.016'S, 79°08.933'W, 2320–2780 m, 14 Apr 1992 (fl), K. Romoleroux & J.L. Luteyn 1362 (QCA-91807). **PERU. • Puno:** Sandía, entre Quinsa Cruz y Muruncunca, 1800 m, 05 Aug 1965 (fr), C. Vargas 16361 (CUZ-5599). **BOLIVIA. • La Paz:** Sud Yungas, Hacienda “La Florida”, 26 May 1920 (fr), E.W.D. Holway & M.M. Holway 654 (US-00641862).

Distribution. *Rubus boliviensis* is recorded in the Andes of Ecuador, Peru and Bolivia.

8. *Rubus bozae* Vargas, Revista Univ. (Cuzco) 32(84): 261. 1943.

Type. PERU. Cusco: Calca, Lares, inmediaciones de Pampa Corral, 3600 m, 09 Feb 1943 (fl, fr), C. Vargas 3212 (holotype: CUZ-3981!).

Notes. *Rubus bozae* is known only from the type collection.

Distribution. *Rubus bozae* is recorded in southern Peru.

9. *Rubus briareus* Focke, Repert. Spec. Nov. Regni Veg. 9: 235. 1911.

Type. BOLIVIA. La Paz: Nor Yungas, Unduavi, 3200 m, 12 Feb 1907 (fl, fr), *O. Buchtien 640* (lectotype, designated here: US-00097866 [image!]; isolectotype: NY-429632 [image!]).

Nomenclature notes. In the protologue, Focke (1911a) cited the gathering *Buchtien 640*, for which we found two specimens, one at NY and the other at US. The voucher at US has flowers and fruits, therefore we designate it as the lectotype of *R. briareus* (Art. 9.3, 9.11 and 9.12 of the ICN).

Additional specimens examined. BOLIVIA. • La Paz: Yungas, 1890 (fl), *M. Bang 684* (US-00641878); Sud Yungas, San Felipe, 19 May 1930 (fl), *E.W.D. Holway & M.M. Holway 617* (US-00641864). • **Cochabamba:** Cerros de Incachaca, 2000–3000 m, 04 Oct 1922 (fl), *J. Steinbach 6068* (US-03733821).

Distribution. *Rubus briareus* is recorded in central Bolivia.

10. *Rubus bullatus* Rusby, Bull. New York Bot. Gard. 4(14): 351. 1907.

≡ *Rubus betonicifolius* Focke, Biblioth. Bot. 72: 33. 1910, nom. illeg. superfl.

Type. BOLIVIA. M. Bang 2235 (lectotype, designated here: NY-429638 [image!]; isolectotypes: E-00010689 [image!], E-00296708 [image!], F-V0068373F [image!], GH-26798 [image!], GH- 26799 [image!], K-000424877 [image!], M-0214195 [image!], MICH-111130 [image!], MO-255141 [image!], NY-429635 [image!], NY-429636 [image!], NY-429637 [image!], PH-21481 [image!], PH-21482 [image!], PUL-380 [image!], US-00097868 [image!], US-00641884 [image!], TEX-371097 [image!]), WU-27792 [image!]).

Nomenclature notes. Rusby (1907) and Focke (1910) described *R. bullatus* and *R. betonicifolius*, respectively, based on *Bang 2235* from different herbaria. Rusby worked at NY at the time of the description, so we designate the specimen NY-429638 as the lectotype (Art. 9.1, 9.3, 9.11 and 9.12 of the ICN) of *R. bullatus*. On the other hand, Focke (1910) described *R. betonicifolius* with two gatherings: *Bang 2235* and *Weberbauer 670*. The name *R. betonicifolius* was superfluous and, therefore, illegitimate when it was published as Focke included the only gathering cited by Rusby.

Specimens examined. PERU. • Cusco: Urubamba, Machu Picchu, Alccamayo, 13°09.033'S, 72°30.467'W, 2500–2840 m, 24 Feb 2003 (fl, fr), *L. Valenzuela, E. Succlli & I Huamantupa 1511* (CUZ-42697). • **Unknown:** Sandía, 06 Apr 1902 (fl, fr), *Weberbauer 670* (B-10-1172571).

Distribution. *Rubus bullatus* is recorded in southern Peru and northern Bolivia.

11. *Rubus chloropetalus* Vargas, Revista Univ. (Cuzco) 32(84): 262. 1943.

Type. PERU. Cusco: Calca, entre Quishuaraní y Lares, 3200–3500 m, 30 Aug 1943, *C. Vargas 3585* (holotype: CUZ-3991! p.p.; isotypes: CUZ!, USM-13834!).

Nomenclature notes. Vargas (1943) cited Vargas 3583 as the type of *R. chloropetalus*, but this collection number is apparently a typographical error: Vargas 3585 has the exact information (locality, altitude and date) given in the protologue, corresponds to the original description and is annotated as “typus”. Therefore, according to Art. 9.2 of the ICN, we correct the collection number of the holotype. However, the holotype collection of *R. chloropetalus* has two different species mounted on the same sheet. The one referring to *R. chloropetalus* occupies most of the space and has broad leaves, while a small collection with smaller leaves, at the lower left of the sheet, is *R. adenothallus*.

Distribution. *Rubus chloropetalus* is recorded in southern Peru.

12. *Rubus choachiensis* A.Berger, J. Wash. Acad. Sci. 16(6): 160. 1926.

= *Rubus gachetensis* A.Berger, J. Wash. Acad. Sci. 16(6): 160. 1926, syn. nov.

- Type. Colombia. [Cundinamarca]: Camino de Gachetá, in forests, 2300 m, Jan 1920 (fl), Brother Ariste-Joseph A543 (holotype: US-00097911 [image!]).

Type. COLOMBIA. Cundinamarca: Páramo de Choachí, near Bogotá, 3700 m, 8 Aug 1922 (fl), E.P. Killip & Brother Ariste-Joseph 11967 (holotype: US-00097876 [image!]).

Taxonomic notes. Berger (1926) described *R. choachiensis* and *R. gachetensis* based on two specimens from Cundimarca. We recognized both names as belonging to the same species, since their holotypes have the same indument, stipules, leaves and flowers. They differ only by a thicker branch in *R. choachiensis*, which was probably collected from a more developed individual.

Specimens examined. COLOMBIA. • Cundinamarca: Subachoque, páramo de El Tablazo, 3300 m, 13 Oct 2003 (fl, fr), M. Hernández Schmidt, J.L. Fernández-Alonso, M.C. Vélez & C.A. Agudelo 1376 (COL-000048593).

Distribution. *Rubus choachiensis* is recorded in the Eastern Cordillera of central Colombia.

13. *Rubus compactus* Benth., Pl. Hartw. [Bentham]: 129. 1844.

Type. ECUADOR. [Loja]: “In montibus Saraguro” [mountain of Saraguro], T. Hartweg 731 (lectotype, designated by Romoleroux 1996, pg. 24: K-000424927 [image!]; isolectotype: LD-1246155 [image!]).

Nomenclature notes. Hartweg’s original collections ended up in different herbaria, so we correct here the typification of the South American names of *Rubus* published in Flora Hartwegiana (Bentham 1839). We located Hartweg 731 at K and LD, both corresponding to the information given in the protologue. Considering that Romoleroux (1996) cited the holotype of *R. compactus* at K, according to Art. 7.11 of the ICN, this was an effective typification at that time. Therefore, we here correct the type status to lectotype.

Specimens examined. ECUADOR. • Azuay: Nabón, páramo de Chunazana, a 5.4 km desde carretera E35, 03°13.372'S, 79°07.050'W, 3170 m, 17 Aug 2023 (fl, fr), D. Espinel-Ortiz & C. Restrepo 439 (QCA). **PERU. • Cusco:** Paucartambo, Cordillera de las tres Cruces, 3600 m, 10–11 Oct 1943 (fl), C. Vargas 3632 (CUZ-5523).

Distribution. *Rubus compactus* is recorded in southern Ecuador and Peru.

14. *Rubus conchyliatus* Focke, Meded. Rijks-Herb. 19: 54. 1913.

≡ *Rubus lechleri* var. *conchyliatus* (Focke) Focke, Biblioth. Bot. 18, Heft 83: 21. 1914.

Type. BOLIVIA. Río Sanjana, 3400 m, *T. Herzog 2206a* (lectotype, designated here: L-0019750 [image!]).

Nomenclature notes. In the protologue, Focke (Herzog 1913) cited *Herzog 2206a* and omitted the specific herbarium. According to Art. 9.3, 9.11 and 9.12 of the ICN, we designate the specimen at L as the lectotype of *R. conchyliatus*.

Specimens examined. BOLIVIA. • La Paz: Sud Yungas, 19.8 km E of pass between Mururata and Illimani, 16°34.000'S, 67°45.000'W, 3500 m, 11 Dec 1983 (fl), *J.C. Salomon 11368* (U-1558220).

Distribution. *Rubus conchyliatus* is recorded in central Bolivia.

15. *Rubus coriaceus* Poir., Encycl. [J. Lamarck & al.] 6(1): 237. 1804.

≡ *Rubus roseus* var. *coriaceus* (Poir.) Ser., Prodr. [A. P. de Candolle] 2: 562. 1825.

= *Rubus stuebelii* Hieron., Bot. Jahrb. Syst. 21(3): 311. 1895. • Type. COLOMBIA. Excursión de Popayán al páramo de Huila, Mar 1869 (fl), *A. Stübel 282f* (lectotype, designated by Romoleroux 1996, pg. 12: B-10-0248190 [image!]).

• Syntype. Colombia. Excursión al Volcán de Chiles, 4000–4500 m, Jan–Feb 1870 (fl), *A. Stübel 461c* (B-10-0248190 [image!]).

= “*Rubus glabratus* var. *heterophyllos* Sodirol ex Benoist”, Bull. Soc. Bot. France 90: 15. 1943 (as “*heterophyllus*”), nom. nud., syn. nov.

Type. PERU. *J. Dombey s.n.* (holotype: P-00678397 [image!]).

Nomenclature notes. Poiret (1804) cited all his new names of South American species of *Rubus* at the Jussieu Herbarium. We have located the holotype and isotype of *R. coriaceus* at P, but only the holotype has a label from the “Herbier D’Antoine Laurent de Jussieu”. According to Art. 9.1 of the ICN, we accept this specimen as the holotype of *R. coriaceus*, but as it has no collection number, we cannot confirm any duplicates. Therefore, the other specimen at P is treated here as possible original material. Benoist (1943) cited *Rivet 314* as “*R. glabratus* var. *heterophyllos*”, but omitted the description and diagnosis. Thus, “*R. glabratus* var. *heterophyllos*” was not validly published (Art. 38.1).

Taxonomic notes. The synonymy follows the revision of Romoleroux (1996), but we also recognize “*R. glabratus* var. *heterophyllos*” as a synonym of *R. coriaceus*. It is a designation whose cited specimen we identified as *R. coriaceus*.

Possible original material of *Rubus coriaceus* Poir.: PERU. *J. Dombey s.n.* (P-00162122 [image!]).

Specimens examined. COLOMBIA. • Caldas: Manizales, La Esperanza, Reserva Torre Cuatro, 05°03.867'N, 75°23.333'W, 3500–3750 m, 22 Feb 2000 (fl), *M. Alvear, D. García & D. Alvear 733* (COL-000197376). **ECUADOR. • Napo:** Límites de la Reserva Ecológica Cayambe-Coca, 00°20.000'S, 78°14.000'W, 3900 m, 18 Nov 1990 (fl, fr), *A.P. Yáñez 73* (QCA-91900). • **Unknown:** Aug 1901 (fl), *A. Sodirol*

407 (QPLS-6755); El Pelado, Jan 1903 (fl), *M. Rivet* 314 (P-03341383). **PERU.**
 • **Lambayeque:** Ferreñafe, Incahuasi, Sinchichual, above Tungula, 06°11.248'S, 79°18.618'W, 3368 m, 24 Nov 2014 (fl, fr), *M. Weigend, J. Chacón, E.F. Rodríguez, T. Henning, L.F. García, S.N. Miranda & D.F. Paredes* 9690 (USM-286340).

Distribution. *Rubus coriaceus* is recorded along the Andes of Colombia, Ecuador, Peru and Bolivia (Romoleroux et al. 2014).

16. *Rubus erythroclados* Mart. ex Hook.f., Fl. Bras. (Martius) 14(2): 62. 1867.

Type. BRAZIL. Minas Gerais: “Habitat in sepibus prope Capaó ubi Tapazii inveniuntur” [habitat in the hedges near Capaó where the Tapazii are found], Feb (fl, fr), *C.F.P. von Martius* 853 (lectotype, designated by Fuks 1984, pg. 13: M-0214178 [image!]). • **Syntypes. BRAZIL. Unknown:** “near Hamhó”, Aug 1840 (fr), *G. Gardner* 4546 (syntype: K-000424880 [image!]); Villa ricca, 1829 (fr), *J.P.E. Pohl s.n.* (syntype: M-0214179 [image!]).

Nomenclature notes. In the protologue, Hooker (1867) cited three specimens: *Martius*, *Pohl s.n.* and *Gardner* 4546. There are two lectotypifications of the name. Fuks (1984) stated that *Martius* 853 (M) is the holotype of *R. erythroclados*, and according to Art. 7.11 of the ICN, this was an effective typification at that time. The other typification comes from Canero et al. (2016), who designated the same specimen as Fuks, as the lectotype of the name. Both authors referred to the same specimen, but the correct typification is that of Fuks. The other specimens are treated here as syntypes.

Specimens examined. BRAZIL. • **Caldas:** Manizales, La Esperanza, Reserva Torre Cuatro, 800 m, 14 Dec 1995 (fr), *R. Wasum* 11570 (US-01351292). **ARGENTINA.** • **Misiones:** Gral. M. Belgrano, entre San Antonio y Bernardo de Yrigoyen, 30 Oct 1960 (fr), *L. Ariza Espinar* 1180 (CORD-00098599). **PARAGUAY.** • **Unknown:** Curuguaty, Sep 1898–1899 (fl, fr), *E. Hassler* 4597 (G-00640003 two sheets).

Distribution. *Rubus erythroclados* is recorded in Argentina, Paraguay and southern Brazil.

17. *Rubus floribundus* Kunth, Nov. Gen. Sp. [H.B.K.] 6[Quarto]: 219. 1823.

≡ *Rubus jamaicensis* var. *floribundus* (Kunth) Kuntze, Revis. Gen. Pl. 1: 221. 1891.
 ≡ *Rubus abundus* Rydb., N. Amer. Fl. 22(5): 454. 1913, nom. illeg. superfl.
 = *Rubus robustus* C.Presl, Epimel. Bot.: 196. 1851. • **Type. PERU.** “In vallibus cordillerum Peruviae” [in the valleys of the Peruvian cordillera], *T. Haenke s.n.* (lectotype, designated by Romoleroux 1996, pg. 45: PRC-450067 [image!]).
 = *Rubus floribundus* var. *nimbatus* J.F.Macbr., Publ. Field Mus. Nat. Hist., Bot. Ser. 8: 118. 1930, syn. nov. ≡ *Rubus robustus* var. *nimbatus* (J.F.Macbr.) J.F.Macbr., Publ. Field Mus. Nat. Hist., Bot. Ser. 13, pt. 2: 1101. 1938. • **Type. PERU.** Huánaco: Huacachi, near Muña, ca 6500 ft, 20 May–01 Jun 1923 (fl, fr), *J.F. Macbride* 3894 (holotype: F-V0041909F [image!]).

Type. ECUADOR. [Loja]: “Crescit in andibus loxensium” [grows on Loja’s Andes], “800–1800 hex”, Aug (fl), *A. von Humboldt & M.A. Bonpland* 3396 (lectotype,

designated by Romoleroux 1996, pg. 42: P-00679379 [image!]; isoelectotype: P-00162116 [image!]).

Nomenclature notes. Romoleroux (1996) cited the lectotype of *R. floribundus* Kunth at P, but we located several additional sheets at P that agreed with the information provided in the protologue. The situation is similar to that of *R. bogotensis*, where the lectotype has a label from the “Herbier Humboldt & Bonpland”. We cite the specimen P-00162116 as an isoelectotype and specimen P-00162114 as possible original material because it lacks the collection number. The name *Rubus floribundus* Weihe has been incorrectly used in Colombia, Peru and Bolivia for several years. The basis of the problem began with Rydberg, who cited the publication of *R. floribundus* Weihe & Nees as dated by 1821 and treated this species name on the basis of erroneously presumed priority. He then used the name *R. abundus* to replace *R. floribundus* Kunth (Rydberg 1913). However, the correct publication date of *R. floribundus* Weihe is 1825, and on the basis of priority the legitimate name is *R. floribundus* Kunth, as cited by Romoleroux (1996).

Taxonomic notes. The synonymy follows the revision of Romoleroux (1996), but we also recognize *R. floribundus* var. *nimbatus* as a synonym of *R. floribundus* due to the lack of clear morphological characters to distinguish it from the type of *R. floribundus*.

Possible original material of *Rubus floribundus* Kunth: ECUADOR. Loja: “Andes” A. von Humboldt & M.A. Bonpland s.n. (P-00162114 [image!]).

Specimens examined. **ECUADOR.** • **Loja:** Carretera Yangana-Cerro Toledo, 04°20.000'S, 79°08.000'W, 1970–2450 m, 14 Nov 1990 (fl), K. Romoleroux 1160B (QCA-137902). **PERU.** • **Cajamarca:** Agua Tapada, 07°10.142'S, 78°31.768'W, 3072 m, 21 May 2013 (fr), I. Sánchez, E. Lineares & A. Galán 3205 (CPUN-23561, USM-289503). **BOLIVIA.** • **Santa Cruz:** Caballero, 15–25 km al N de San Juan de Potrero, hacia Cerro Bravo, 17°48.000'S, 64°15.000'W, 2000–2500 m, 6 Jun 1992 (fl), T. Killeen & I. Vargas 4067 (MO-1604562).

Distribution. *Rubus floribundus* is recorded along the Andes of southern Ecuador, Peru and Bolivia.

18. *Rubus geoides* Sm., Pl. Ic. Ined.: t. 19 (as “XIX”). 1789.

≡ *Dalibarda geoides* (Sm.) Pers., Syn. Pl. [Persoon] 2(1): 53. 1807. ≡ *Rubus antarcticus* Kuntze, Meth. Sp.-Beschr. Rubus 115. 1879, nom. illeg. superfl.

Type. CHILE. Magellan, P. Commerson s.n. (holotype: LINN-HS-902.95 [image!]).

Nomenclature notes. We traced back the collection LINN-HS-902.95, which corresponds to the drawing of *R. geoides* cited in the protologue. According to Art. 9.1 of the ICN, we recognize this specimen as the holotype of *R. geoides*. Kuntze (1879) proposed *R. antarcticus* to unite *R. geoides*, *R. radicans* and *R. gunnianus* in one species. Therefore, in the diagnosis and description of *R. antarcticus*, characters of these three taxa are mixed. However, *R. geoides*, *R. radicans* and *R. gunnianus* are separate, distinct species. *Rubus antarcticus* is therefore an illegitimate, superfluous name (ICN 52.1), since the oldest, legitimate name (*R. geoides*) should have been accepted in its place.

Taxonomic notes. We recognize *R. geoides* and *R. radicans* as separate species on the basis of the short pedicels (> 1.5 cm) and glabrous leaves of *R. geoides* compared to the long pedicels (> 2 cm) and pubescent leaves of *R. radicans*.

Specimens examined. ARGENTINA. • **Chubut:** Lago Futalaufquen, 27 Mar 1949 (fr), T.M. Pedersen 313 (US-03733386). • **Tierra del Fuego:** Jan 1769 (fl), J. Banks & D. Solander s.n. (US-01299814); Estancia Harberton, 26 Nov 1967 (fr), N. Goodall 1027 (US-03733384). **CHILE.** • **[Valparaíso]:** Archipiélago Juan Fernández, “Masafuera” [Isla Alejandro Selkirk], Las Torres, 1100 m, 28 Jan 1955 (fl) I. Skottsberg & C. Skottsberg 158 (US-03733381); same locality as for preceding, 1150–1300 m, 14–25 Feb 1917 (fr), I. Skottsberg & C. Skottsberg 404 (US-03733382); Archipiélago Juan Fernández, “Masafuera” [Isla Alejandro Selkirk], Los Inocentes, 1000–1200 m, 02 Dec 1965 (fl, fr), O.T. Solbrig, H.E. Moore & J. Walker 3740 (US-03733380).

Distribution. *Rubus geoides* is recorded in southern Argentina and the Tierra del Fuego Archipelago in Argentina and Chile.

19. *Rubus glabratus* Kunth, Nov. Gen. Sp. [H.B.K.] 6[Quarto]: 221. 1823.

= *Rubus ostrinus* Focke, Biblioth. Bot. 18, Heft 83: 21. 1914, syn. nov. • Type. BOLIVIA. [La Paz]: Nord-Yungas, 4000 m, O. Buchtien 2857 (lectotype, designated here: US-00641902 [image!]).

Type. COLOMBIA. “Pasto, prope Guachucal” [near Guachucal], “1620 hex”, Dec (fl), A. von Humboldt & M.A. Bonpland 2187 (lectotype, designated by Romoleroux 1996, pg. 17: P-00679382 [image!]; isoelectotypes: B-10-0248188 [image!], P-00162117 [image!], P-00162119 [image!]).

Nomenclature notes. The situation of the typification of *R. glabratus* is similar to that of *R. bogotensis* and *R. floribundus*. Romoleroux (1996) cited the lectotype at P, but we found several sheets corresponding to the information provided in the protologue. The lectotype of *R. glabratus* has a label from the “Herbier Humboldt & Bonpland”. Focke (1914) cited the collection Buchtien 2857 in the protologue of *R. ostrinus* and we designate the specimen at US as the lectotype of this name (Art. 9.3, 9.11 and 9.12 of the ICN).

Taxonomic notes. We recognize *R. ostrinus* as a new synonym of *R. glabratus* due to the absence of trichomes in branches and leaves, presence of small, trifoliolate leaves, asymmetrically ovate stipules, solitary flowers or small inflorescences with up to 5 flowers, and ovate sepals, with bi- or trifurcations towards the apex when mature present in both type collections.

Specimens examined. VENEZUELA. • **Mérida:** Sierra Nevada, Sep 1846 (fl), N. Funck & L.J. Schlim 1142 (P-03340873) • **Trujillo:** Boconó, Parque Nacional Guaramacal, 2200–2900 m, 15 Jun 2001 (fl), L.H. Dorr, S.M. Niño & R. Caracas 9024 (US-00662899). **COLOMBIA.** • **Boyacá:** Páramo de la Rusia, NW de Duitama, 3755 m, 12 Dec 1972 (fl), A.M. Cleef 7078 (U-1557324). • **Cauca:** Puracé, 3300 m, 19 Sep 2003 (fr), J.P.M. Martínez 141 (COL-000049524). **ECUADOR.** • **Carchi:** Tulcán-El Ángel road, ca 9 km SW of Pan American Highway, 00°48.000'N, 77°48.000'W, 3385 m, 04 Nov 1990 (fl), J.L. Luteyn, J. Ballington, M. Thompson, K. Romoleroux & R. Castillo 14030 (QCA-91984). • **[Loja]:** “Loxa”, A. von Humboldt & M.A. Bonpland 2187 (P-000162118). **PERU.** • **Cusco:**

Paucartambo, Acnajaco, subida a Quellhua Ccocha, Parque Nacional Manu, 3404 m, 01 Jul 1991 (fl, fr), A. Cano & S. Baldeón 4912 (USM-108815). **BOLIVIA.**

• **La Paz:** Franz Tamayo, Parque Nacional Madidi, Munagamachay, entre Keara y Mojos, 14°41.567'S, 69°00.467'W, 3404 m, 24 Jun 2005, A. Fuentes, T. Miranda, J. Colque, R. Hurtado, I. Jiménez, E. Cuevas & R. Cuevas 8652A (QCA-91958).

• **Cochabamba:** Chaparé, km 104 on road from Cochabamba to Chaparé and Villa Tunaré, 3025 m, 17 Feb 1971 (fl, fr), J.G. Hawkes, J.P. Hjerting, P.J. Cribb & Z. Huamán 4441 (MO-1604544).

Distribution. *Rubus glabratus* is recorded along the Andes of Venezuela, Colombia, Ecuador, Peru and Bolivia.

20. *Rubus glaucophyllus* Vargas, Revista Univ. (Cuzco) 32(84): 263. 1943.

Type. PERU. Cusco: La Convención, alturas de Quillabamba, “El Dorado”, 2900 m, 03 Aug 1943 (fl, fr), C. Vargas 3502 (holotype: CUZ-4002!; isotype: CUZ-4003!).

Additional specimens examined. PERU. • Cusco: Paucartambo, Jamamayo, 1800 m, 04 May 1947 (fl), C. Vargas 6488 (CUZ-5607!).

Distribution. *Rubus glaucophyllus* is known only from the type collection.

21. *Rubus glaucus* Benth., Pl. Hartw. [Bentham]: 173. 1845.

Type. ECUADOR. [Pichincha]: “In declivitate montis Pichincha, et frequenter cultus sub nomine Mora de Castillo” [in slopes of Pichincha mountain, and frequently cultivated under the name “Mora de Castilla”], T. Hartweg 973 (lectotype, designated by Romoleroux 1996, pg. 29: K-000424919 [image!]; isolecotype: LD-1036950 [image!]).

Nomenclature notes. The situation of the typification of *R. glaucus* is similar to that of *R. compactus*, where the original material was available at two herbaria. We located specimens from Hartweg 973 at K and LD, both of which correspond to the protologue information. Considering that Romoleroux (1996) cited the holotype in K, according to Art. 7.11 of the ICN, this was an effective typification at that time. Therefore, we here correct the designation to lectotype.

Specimens examined. COLOMBIA. • Boyacá: Paipa, Vereda La Pradera, 2650 m, 02 Dec 1978 (fl, fr), S. Díaz 1445 (COL-000197464). **ECUADOR. • Carchi:** Tulcán-Maldonado road, 3–10 km of Tulcán, 00°50.000'N, 77°50.000'W, 2954–3077 m, 02 Nov 1990 (fl, fr), J.L. Luteyn, J. Ballington, M. Thompson, K. Romoleroux & R. Castillo 104018 (QCA-92020, QCA-7000025).

Distribution. Romoleroux et al. (2014) cited *Rusby 471* (Bolivia) as *R. glaucus*, but we re-identified it as *R. ruizii*. No other collections of *R. glaucus* from Bolivia are known. The “Mora de Castilla”, *R. glaucus*, is distributed from Mexico through Central America, finding its southern range limit in the Andes of Ecuador.

22. *Rubus guyanensis* Focke, Abh. Naturwiss. Vereins Bremen 4: 160. 1874.

≡ “*Rubus schomburgkii* Klotzsch”, Reis. Br.-Guiana [Ri. Schomburgk] 3: 1102. 1848, nom. nud.

Type. GUYANA. Roraima, Nov 1842 (fl), *R. Schomburgk* 1038 (lectotype, designated here: US-00468755 [image!]; isolectotype: NY-64737 [image!]).

Nomenclature notes. Focke (1874) published *R. guyanensis*, presumably based on the same specimen cited by Klotzch (Schomburgk et al. 1848) as “*R. schomburgkii*”. Klotzch’s name, despite being older, is invalid because it lacks a diagnosis or description (Art. 38.1 of the ICN) and does not refer to a description in an earlier publication (Art. 38.13). Furthermore, in the protologue, Focke (1874) cited the specimen from *R. Schomburgk* without indicating a specific herbarium. However, we found five specimens with the correct locality and collector, but with different collection numbers, that can be divided into three groups:

- 1) *R. Schomburgk* 1038 at US and NY;
- 2) *R. Schomburgk* 688 in P (two collections);
- 3) *R. Schomburgk* 688(1038) in K.

The collections in group 1 had a label from herbarium B (Ex Museo botanico Berolinense), the same collection year and locality as in the protologue, while those in groups 2 and 3 had only the same locality. Furthermore, the specimen in group 3 had two collection numbers. Considering that Focke was working at B at the time of the description, the original material must have been housed at B at some stage. We therefore designate the specimen at US as the lectotype, and the leaflet, flower fragment and photograph at NY is an isolectotype. The specimens in groups 2 and 3 are treated here as possible original material.

Possible original material of *Rubus guyanensis* Focke: GUYANA. Roraima, *R. Schomburgk* 688 (P-03372098 [image!], P-04114169 [image!]); same locality as for preceding, *R. Schomburgk* 688(1038) (K-000424881 [image!]).

Specimens examined. VENEZUELA. • **Trujillo:** Boconó, Parque Nacional Guaramacal, 1800–1900 m, Aug 2000 (fl), B. Stergios & R. Caracas 18745 (US-00628291); same locality as for preceding, 09°15.233'N, 70°11.368'W, 2677–3100 m, 14 Jun 2001 (fr), L.J. Dorr, S.M. Miño & R. Caracas 8974 (US-00662896). **COLOMBIA.** • **Huila:** Balsilla, on Río Balsillas, 2000–2300 m, 03–06 Aug 1917 (fl), H.H. Rusby & F.W. Pennell 912 (US-03733450). **BRAZIL.** • **Roraima:** “am Abhang der Felsen” [on the rock precipice], 2200 m, Dec 1909 (fl), E. Ule 8617 (L-1907464).

Distribution. *Rubus guyanensis* is recorded in Colombia, Venezuela, Guyana and northern Brazil.

23. *Rubus imperialis* Cham. & Schtdl., *Linnaea* 2(1): 13. 1827.

Type. BRAZIL. Santa Catarina: Apúna, Faxinalzinho, 27°10.817'S, 49°23.617'W, 793 m, 27 Sep 2018 (fl), A. Kassner-Filho, D. Santos, G. Bollmann & L.F. Althoff 3519 (neotype, designated here: FURB-60544 [image!]).

Nomenclature notes. Schlechtendal and Chamisso (1827) cited five specimens in the protologue: “St. Catharina” and “Rio de Janeiro” collected by the authors, “prope Clemente ad Rio Paquaquer” collected by Beyrich, and “in provinciis Rio grande do Sul” and “Montevideo” collected by Sellow. However, we were unable to locate any of the syntypes. *Rubus imperialis* is a well-documented species from Brazil, thus we studied the material available and compared it

with the description. We provisionally accept this species. As there is no extant original material, according to Art. 9.8 of the ICN, we designate *A. Kassner-Filho* 3519 as the neotype of *R. imperialis*.

Specimens examined. **BRAZIL.** • **Paraná:** Barras, 04 Jan 1974 (fr), G. Hatschbach 33628 (MBM-034288). **ARGENTINA.** • **Tucumán:** En los matorrales de Tucumán, 8 Oct 1887 (fl), L. 122 (P-03373467).

Distribution. Romoleroux et al. (2014) cited *Solomon* 18420 (Bolivia) as *Rubus imperialis*, but this specimen was re-evaluated here as *R. boliviensis*. Therefore, *R. imperialis* is found only in Argentina and Brazil.

24. *Rubus jamaicensis* L., Syst. Nat., ed. 12. 2: 349. 1767.

≡ “*Rubus jamaicensis* var. *normalis* Kuntze”, Revis. Gen. Pl. 1: 221. 1891, nom. inval.
= *Rubus jamaicensis* var. *nudicaulis* Kuntze, Revis. Gen. Pl. 1: 221. 1891, syn. nov. • Type. VENEZUELA. May 1874, O. Kuntze s.n. (lectotype, designated here: NY-429644 [image!]).

Type. (lectotype, designated by Adams in Cafferty and Jarvis 2002, pg. 543): [icon] “*Rubus foliis longioribus subtus molli lanugine obductis & incanis, flore & fructu minoribus*” in Sloane, Voy. Jamaica 2: t. 213, f. 1. 1725. • **Epitype.** **JAMAICA.** H. Sloane s.n. (epitype, designated here: BM-000594064 [image!]).

Nomenclature notes. Adams (Cafferty and Jarvis 2002) cited an illustration as the lectotype of *R. jamaicensis*. At the same time, he cited the specimen BM-000594064 as the “topotype”. This collection was used for the illustration, so we select it as the epitype of this name. The original illustration is available at BM (BM-000594063).

Kuntze (1891) used “*R. jamaicensis* var. *normalis*” to distinguish the typical form of *R. jamaicensis* from three other varieties, thus including its type. According to Art. 24.3 of the ICN, “*R. jamaicensis* var. *normalis*” is an invalid name because its final epithet differs from that of the corresponding higher taxon. On the other hand, the other name *R. jamaicensis* var. *nudicaulis* is legitimate. We located three specimens at NY with handwritten annotation by Kuntze and designate specimen NY-429644 as the lectotype of this name. The other two specimens are treated here as original material.

Taxonomic notes. We consider *R. jamaicensis* var. *nudicaulis* to be a synonym of *R. jamaicensis*. It has the same curved, abundant prickles on the petioles, the same indument of petioles and leaves, especially the pannose abaxial surface of the leaf, and the same absence of or very few trichomes on the branches as in the epitype of *R. jamaicensis*.

Original material of *Rubus jamaicensis* var. *nudicaulis* Kuntze: VENEZUELA. May 1874, O. Kuntze s.n. (NY-990592 [image!], NY-990593 [image!]).

Specimens examined. **GUYANA.** • **Cuyuni-Mazaruni:** Mount Maingma, southern slopes of summit escarpment, Arabaru River, 05°12.277'N, 60°34.598'W, 1360 m, 11 Jun 2014 (fr), H.D. Clarke, C. Perry, E. Tripp, S. Stern & D. Gittens 11572 (US-00889792). **VENEZUELA.** • **Miranda:** Oripoto, 1400 m, 16 Jan 1954, Bro. Gines 4564 (US-03733828). **COLOMBIA.** • **Norte de Santander:** Northern slope of Mesa de los Santos, 1000–1500 m, 11–15 Dec 1926 (fr), E.P. Killip & A.C. Smith 15021 (US-03733613).

Distribution. *Rubus jamaicensis* is reported from Jamaica, northern Guyana, northern Venezuela and northern Colombia.

25. *Rubus killipii* A.Berger, J. Wash. Acad. Sci. 16(6): 161. 1926.

= *Rubus pastasanus* Diels, Notizbl. Bot. Gart. Berlin-Dahlem 15: 370. 1941.
• Type. ECUADOR. Pastaza: Río Pambay, a lado del paso lateral de Puyo, 01°28.089'S, 78°00.542'W, 955 m, 12 Aug 2023, D. Espinel-Ortiz & C. Restrepo 391 (neotype, designated here: QCA!; isoneotype: BONN! four sheets).

Type. COLOMBIA. Cauca: “La Gallera”, Micay Valley, Cordillera Occidental, clearing near Río San Joaquin, 1100–1300 m, 29–30 Jun 1922, E.P. Killip 7835 (holotype: US-1142423 [image!]; isotypes: GH-40520 [image!], NY-429646 [image!]).

Notes. Diels (1941) cited *H. Schultze-Rhonhof* 2969 as the holotype of *Rubus pastasanus*, which was in B (Renner 1993). It seems to have been destroyed during WWII, and no duplicates have been located (Romoleroux 1996). As no original material is extant, based on Art. 9.16 of the ICN, we designate collection D. Espinel-Ortiz & C. Restrepo 391 as the neotype of *R. pastasanus*. It was collected in Puyo (near Mera) at the same altitude and matches the original description.

Specimens examined. ECUADOR. • Tungurahua: Vía a Baños entre Río Negro y Mera, a 2 km de Río Negro en carretera E30, 01°25.194'S, 78°10.536'W, 1333 m, 12 Aug 2023, D. Espinel-Ortiz y C. Restrepo 390 (QCA).

Distribution. *Rubus killipii* is found in southern Colombia and Ecuador.

26. *Rubus laegaardii* Romol., Fl. Ecuador 56: 15. 1996.

Type. ECUADOR. Morona Santiago: Near the pass on the road Sigsig-Gualaquiza, 3°09.000'S, 78°43.000'W, 3300 m, 29 May 2019, S. Lægaard, L.G. Clark & P. Stern 103042 (holotype: AAU [image!] two sheets; isotype: QCA-92046!).

Specimens examined. ECUADOR. • Loja: Carretera Yangana-Zumba, desvío Cerro Toledo, 04°22.485'S, 79°06.677'W, 3080 m, 09 Feb 2002 (fl, fr), K. Romoleroux, S. León-Yáñez & V. Sandoya 4075 (QCA-92062, QCA-7000123). **PERU. • Cajamarca:** San Ignacio, abaconas, Santuario Nac, Tabaconas-Namballe, alrededores de las lagunas Coyona (Arrebiatadas), 05°13.525'S, 79°16.480'W, 3140–3180 m, 08 Apr 2003 (fl), S.M. Baldeón-Malpartida & L.A. Ocupa 5126 (USM-266692).

Distribution. *Rubus laegaardii* is known from the Andes of southern Ecuador and northern Peru. We report here for the first time the presence of *R. laegaardii* in Peru.

27. *Rubus longistipularis* Espinel-Ortiz & Romol., PhytoKeys 187: 143. 2021.

Type. ECUADOR. Pichincha: Nono-Tandayapa road, between km 116–117, 00°01.787'S, 78°38.567'W, 1950 m, 26 Jul 2021 (fl, fr), D. Espinel-Ortiz & H.G. Abad 281 (holotype: QCA-243418!, QCA-7010714! to QCA-7010723!); isotypes: BONN! four sheets, HA-13781!, HUTI!, QAP!).

Specimens examined. ECUADOR. • Pichincha: Quito, Nanegalito, vía a San Tadeo, Área Protegida Privada Bellavista, 00°01.011'S, 78°40.867'W, 2255 m,

03 Dec 2021 (fr), *D. Espinel-Ortiz y H.G. Abad* 297 (QCA-244016) • same locality as for preceding, 00°01.938'S, 78°41.756'W, 2303 m, 03 Dec 2021 (fr), *D. Espinel-Ortiz y H.G. Abad* 299 (QCA-244018, QCA-7010803, QCA-7010804).

Distribution. *Rubus longistipularis* is reported from the Andes of northern and central Ecuador.

28. *Rubus loxensis* Benth., Pl. Hartw. [Bentham]: 128. 1843.

= *Rubus extensus* Fritsch in Szyszyl., Diss. Cl. Math.-Phys. Acad. Litt. Cracov. 29: 221. 1894. • Type. PERU. Chonta Cruz, Tambillo, *C. von Jelski* 3 (lectotype, designated by Romoleroux 1996, pg. 7: B-10-0248186 [image!]).

= *Rubus extensus* f. *major* Fritsch in Szyszyl., Diss. Cl. Math.-Phys. Acad. Litt. Cracov. 29: 221. 1894. • Type. PERU. Cutervo, *C. von Jelski* 4 (lectotype, designated by Romoleroux 1996, pg. 7: KRA (n.v.)).

Type. ECUADOR. [Loja]: “In montibus prope Loxa” [In mountain near Loja], *T. Hartweg* 731 (lectotype, designated by Romoleroux 1996, pg. 7: K-000424878 [image!]; isoelectotype: LD-1211845 [image!]).

Nomenclature notes. The situation of the typification of *R. loxensis* is similar to that of *R. compactus* and *R. glaucus*. Specimens from *Hartweg* 731 are available at K and LD, and a lectotype is required (Art. 9.3 of the ICN). Romoleroux (1996) effectively typified the species name at that time (Art. 7.11) when she cited the collection in K as the holotype. We correct the type status to lectotype.

Taxonomic notes. The synonymy follows the revision of Romoleroux (1996).

Specimens examined. ECUADOR. • Loja: Yangana-Cerro Toledo, 04°23.000'S, 79°07.000'W, 2900 m, 30 Jan 1999 (fl, fr), *S. Lægaard* 19518 (QCA-92058). **PERU. • Cajamarca:** Jaén, Sallique, La Cocha, 05°40.967'S, 79°14.883'W, 2960 m, 21 Jun 1998 (fr), *J. Campos, C. Díaz, H. Tineo & P. Julca* 5054 (USM-163652).

Distribution. *Rubus loxensis* is recorded in the Andes of southern Ecuador, Peru and Bolivia (Romoleroux et al. 2014).

29. *Rubus mandonii* Focke, Abh. Naturwiss. Vereins Bremen 4: 162. 1874.

Type. BOLIVIA. La Paz: Larecaja province, 2750–3200 m, Oct 1858–Apr 1859 (fl, fr), *G. Mandon* 659 (lectotype, designated here: S-08-15139 [image!]; isoelectotypes: BR-33828558 [image!], K-000424920 p.p. [image!], NY-435731 [image!], P-03372114 p.p. [image!], P-00682384 [image!]).

Nomenclature notes. Focke (1874) cited *Mandon* 659 at LUB in the prologue of *R. mandonii*. However, we could not locate it, but found duplicates at BR, K, NY, P and S. According to Art. 9.3, 9.11, and 9.12 of the ICN, we designate the specimen from S as the lectotype, because it is the only one with 5-foliolate leaves corresponding to the original description. All the other specimens are treated as isoelectotypes, except for specimen BR-33828558, which has a different locality and is treated here as possible original material.

Taxonomic notes. *Rubus mandonii* is similar to *R. nubigenus*, but differs by the glabrous or slightly pubescent branches, narrowly elliptic stipules, and

5-foliolate leaves of *R. mandonii* vs. the tomentose branches, broadly ovate to auriculate stipules and trifoliate leaves of *R. nubigenus*.

Specimens examined. BOLIVIA. • **Cochabamba:** Siberia, 3300 m, Jul 1955 (fl), *M. Cárdenas* 5215 (L-1921409).

Distribution. *Rubus mandonii* is recorded in northern and central Bolivia.

30. *Rubus maquipucunensis* Espinel-Ortiz & Romol., PhytoKeys 187: 149. 2021.

Type. ECUADOR. Pichincha: cantón Quito, parroquia Nanegal, in front of the Ecological Reserve Maquipucuna entrance, 00°07.457'S, 78°37.744'W, 1278 m, 11 Feb 2021 (fl, fr), *D. Espinel-Ortiz, C. Restrepo & A. Sanguano* 269 (holotype: QCA-243282!, QCA-7010670! to QCA-7010679!; isotypes: HA-13781!, HUTI!, LOJA!, Q!, QCNE!).

Specimens examined. ECUADOR. • **Santo Domingo de los Tsáchilas:** old road San Juan-Chiriboga, km 60–70, 00°17.000'S, 78°50.000'W, 1000–1500 m, 09 Jan 1993 (fl), *K. Romoleroux & A. Freire* 1514 (QCA-92036, QCNE-77110).

Distribution. *Rubus maquipucunensis* is recorded in the western flank of the Andes of northern Ecuador.

31. *Rubus megalococcus* Focke, Abh. Naturwiss. Vereins Bremen 4: 157. 1874.

= *Rubus buchtienii* Focke, Repert. Spec. Nov. Regni Veg. 9: 237. 1911, syn. nov.

• **Type. BOLIVIA.** La Paz: Nor Yungas, Unduavi, 3300 m, Nov 1910 (fl), *O. Buchtlen* 641 (lectotype, designated here: NY-429634 [image!]).

Type. BOLIVIA. La Paz: Larecaja, “viciniis Sorata” [near Sorata], 3000–3200 m, 1859 (fl), *G. Mandon* 662 (lectotype, designated by Romoleroux 1996, pg. 31: W (n.v.); isolectotypes: K-000424917 [image!], P-00682383 [image!], P-00682386 [image!]).

Nomenclature notes. Focke (1911a) cited *Buchtien* 641 in the protologue of *R. buchtienii*, but did not specify a herbarium. We located a single specimen at NY and, according to Art. 9.3, 9.11, and 9.12 of the ICN, we designate it as the lectotype.

Taxonomic notes. We consider *R. buchtienii* to be a synonym of *R. megalococcus* because it has the same glabrous or puberulent indument in almost the whole plant, glabrous adaxial surface of the leaf with some trichomes near the veins, axillary inflorescences with up to 25 flowers and ovate-lanceolate sepals as *R. megalococcus*.

Specimens examined. ECUADOR. • **Loja:** Parque Nacional Yacuri, Jimbura, 04°42.950'S, 79°25.233'W, 3230–3450 m, 22 Apr 2015 (fr), *Á.J. Pérez, N. Zapata, W. Santillán & R. Jiménez* 8681 (QCA-233883). **PERU.** • **Pasco:** Oxapampa, Huancabamba, zona de amortiguamiento del Parque Nacional Yanachaga Chemillén, 10°19.083'S, 75°36.467'W, 2567 m, 25 Jun 2008 (fr), *A. Monteagudo, A. Peña, J.L. Mateo & R. Rivera* 16499 (USM-234511). **BOLIVIA.** • **La Paz:** Nor Yungas, Unduavi, 3300 m, Nov 1910 (fr), *O. Buchtlen* 173 (B-10-0278021, BR-13347901, E-00296709, GH-40519, K-000042918, M-0214192, NY-429633); Sud Yungas, 1.8 km W of Unduavi on road to La Paz, 16°18.000'S, 67°55.000'W, 3300 m, 21 Mar 1984 (fr), *J.C. Solomon, B. Stein & M. Uehling* 11970 (US-3733542).

Distribution. *Rubus megalococcus* is recorded in the Andes of southern Ecuador, Peru and Bolivia.

32. *Rubus mollifrons* Focke, Repert. Spec. Nov. Regni Veg. 9: 236. 1911.

Type. COLOMBIA. Magdalena: Santa Marta, 1898–1901 (fl), *H.H. Smith* 2512 (neotype, designated here: US-03733639 [image!]).

Nomenclature notes. The name *R. mollifrons* has not been used for several years, due to the absence of a type specimen. In the protologue, Focke (1911a) did not cite any collection, but mentioned that *R. mollifrons* resembles *R. floribundus* and is found in the Caribbean near South America, in Colombia and Venezuela. Fortunately, he published a photograph of the original material in his later monograph on the genus *Rubus* (Focke 1914), but we were unable to locate any extant material. We therefore used the photograph of *Karsten* 21 to identify the species and select *Smith* 5212 as the neotype of *R. mollifrons* (Art. 9.8 of the ICN).

Photograph of original material of *Rubus mollifrons* Focke: Colombia. 1846 (fl), *H. Karsten* 21 (F [image!]).

Specimens examined. VENEZUELA. • Distrito Capital: Parque Nacional El Ávila, camino hacia “El Paraíso”, 1100–1500 m, 29 Jul 1970 (fl), *R. Labbiente* 74 (US-03733604); Galipan, Nov 1924 (fl), *A. Allart* 168 (US-03733603); Las Flores, Sierra de El Ávila, 1600 m, 15 Dec 1938 (fl), *A.H.G. Alston* 5509 (US-03733598).

Distribution. *Rubus mollifrons* is reported from northern Venezuela and northern Colombia near the Caribbean.

33. *Rubus neobrasiliensis* Espinel-Ortiz, Böhnert, Romol. & Weigend, nom. nov.

≡ “*Rubus brasiliensis* Mart.”, Cat. Hort. Monac.: 173. 129. 1829, nom. nud.
≡ *Rubus brasiliensis* Mart. ex Hook.f., Fl. Bras. (Martius) 14(2): 62. 1867, nom. illeg. superfl.

Type. BRAZIL. Rio de Janeiro: *C.F.P. von Martius* s.n. (lectotype, designated by Fuks 1984, pg. 16: M-0214193 [image!]).

Nomenclature notes. There are some problems regarding the correct nomenclature of widely used *R. brasiliensis*. This name first appeared in the book “Hortus Regius Monacensis”, where Martius used “*R. brasiliensis*”, but omitted its respective diagnosis and description (Schränk and Martius 1829). According to the Art. 38.1 of the ICN, descriptive matter was necessary for the name to be validly published. We could not find any reference to an earlier description (Art. 38.13), and later publications written by or edited by Martius referred to page 173 of “Hortus Regius Monacensis” (Martius 1843; Hooker 1867). Therefore, according to Art. 38 of the ICN, *R. brasiliensis* was not validly published in 1829 and 1843.

The next time this name appeared in a revision, was by Hooker (1867) in *Flora brasiliensis*. Here, Hooker (1867) included a description of the species and cited two gatherings: *Martius* s.n. and *Pohl* s.n. According to Art. 38 of the ICN this was a valid publication of *R. brasiliensis*, but the species name was illegitimate. In the protologue, Hooker (1867) included *R. organensis* as a variety of *R. brasiliensis*. Therefore, the correct name of the species should have been *R. organensis*. However, we consider *R. organensis* and *R. brasiliensis* to be two different taxa, so a replacement name is needed for the latter. We decided on *R. neobrasiliensis* as a replacement name of *R. brasiliensis*. The corresponding

lectotype was effectively designated by Fuks (1984), when she treated *Martius* s.n. as the holotype (Art. 7.11).

Taxonomic notes. We follow the revision of Fuks (1984), but recognize *R. neobrasiliensis* and *R. organensis* as two distinct taxa due to the following differences. *Rubus neobrasiliensis* is characterized by straight prickles covering the whole plant, absent or rarely present stipitate glands, broader stipules (6–10 × 1.5–1.8 mm) and densely villous-tomentose, thick leaves, especially on the abaxial surface near the veins compared to the curved prickles and stipitate glands covering the whole plant, narrower stipules (9–10.5 × 0.9–1.1 mm) and villous leaves, especially near the veins on the adaxial and abaxial surface of *R. organensis*.

Specimens examined. BRAZIL. • Bahia: Abaíra, distrito de Catolés, caminho para o Pico do Barbado, Mata da Furquilha, 14 Apr 1999 (fl, fr), R.C. Forzza, A.M. Amorim, S.C., D.E. Sant’ana & C.B. Costa 1216 (NY-1874351). **PARAGUAY. • Unknown:** E. Hassler 4689 (NY-656597).

Distribution. *Rubus neobrasiliensis* is recorded in southern Brazil and Paraguay.

34. *Rubus novogranatensis* Aspl., Bot. Not. 1939: 799. 1939.

Type. COLOMBIA. Cauca: Cordillera Central, Puracé, 3700 m, Feb 1938 (fl), K. von Sneidern 1794 (holotype: S-R-8022 [image!]; isotypes: A-40521 [image!], B-10-0248184 [image!], NY-429647 [image!]).

Nomenclature notes. Asplund (1939) cited the types of *R. novogranatensis* and *R. sneidernii*, but did not specify a herbarium. In the introduction, however, he stated that Kjell von Sneidern’s collections were deposited in S, where we located specimens corresponding to the information from the protologue. According to Art. 9.1 of the ICN, the specimens at S correspond to the holotypes of *R. novogranatensis* and *R. sneidernii*.

Specimens examined. COLOMBIA. • Valle del Cauca: Cordillera Central, Quebrada Las Vegas, 3400–3500 m, 23 Mar 1946 (fr), J. Cuatrecasas 20353 (U-01557318, US-03733836).

Distribution. *Rubus novogranatensis* is reported from the Cordillera Central in Colombia.

35. *Rubus nubigenus* Kunth, Nov. Gen. Sp. [H.B.K.] 6[Quarto]: 220. 1823.

= *Rubus macrocarpus* Benth., Pl. Hartw. [Bentham]: 129. 1844. • Type. ECUADOR. Loja: “In jugo montium prope Loxa” [mountains near Loja], T. Hartweg 731* (lectotype, designated by Romoleroux 1996, pg. 22: K-000424922 [image!]; isolectotype: LD-1246215 [image!]).

= *Rubus stipularis* Benth., Pl. Hartw. [Bentham]: 173. 1845. • Type. ECUADOR. Pichincha: “In decivitate montis Pichincha” [at the foot of Pichincha mountain], 11500 ft, T. Hartweg 971 (lectotype, designated by Romoleroux 1996, pg. 22: K-000424924 [image!]; isolectotype: LD-1060102 [image!]).

= *Rubus lechleri* Focke, Abh. Naturwiss. Vereins Bremen 4: 161. 1874, syn. nov. ≡ *Rubus roseus* var. *lechleri* (Focke) J.F. Macbr., Publ. Field Mus. Nat. Hist., Bot. Ser. 8: 118. 1930. • Type. PERU. Cajamarca: “In virgultis prope Agapta” [in

- bushes near Agapta], Jun 1854, *W. Lechler* 1997 (lectotype, designated here: K-000424925 [image!]; isolectotype: GOET-010123 [image!]).
- = *Rubus holtenii* Kuntze, Revis. Gen. Pl. 3[3]: 78. 1898, syn. nov. • Type. BOLIVIA. 2500 m, 1–4 Apr 1892 (fr), *O. Kuntze* s.n. (lectotype, designated here: NY-429640 [image!]).
- = *Rubus andicola* Focke, Biblioth. Bot. 72: 36. 1910, syn. nov. • Type. PERU. Junín: Tarma, Huacapistana, 2600–2700 m, 20 Jan 1903 (fl, fr), *A. Weberbauer* (lectotype, designated here: B-10-1172570 [image!]).
- = *Rubus sneidernii* Aspl., Bot. Not. 1939: 799. 1939, syn. nov. • Type. COLOMBIA. Cauca: “ad pag. El Tambo Munchique” [near El Tambo in Munchique], 2500 m, 26 Apr 1936 (fl), *K. von Sneidern* 648 (holotype: S-R-8024 [image!]; isotypes: B-10-0248183 [image!], NY-429656 [image!]).

Type. ECUADOR. Pichincha: Páramo de puntas, “1700 hex”, Jan (fl, fr), *A. von Humboldt & M.A. Bonpland* 3088 (lectotype, designated by Romoleroux 1996, pg. 21: P-00679381 [image!]; isolectotype: B-W-09899-010 [image!], P-00162120 [image!]).

Nomenclature notes. The situation of the typification of *R. nubigenus* is similar to that of *R. bogotensis*, *R. floribundus* and *R. glabratus*. We located three sheets at P that were treated as type material of *R. nubigenus*, but only two of them correspond to the typification of Romoleroux (1996) and the information on the protologue. We omit specimen P-00162121 from the type material, although it has the same collection number, because it was collected in Peru, while the type of *R. nubigenus* was collected in Ecuador. The lectotype of *R. nubigenus* has a label from the “Herbier Humboldt & Bonpland”.

The situation of the typification of *R. macrocarpus* and *R. stipularis* is similar to that of *R. compactus*, *R. glaucus* and *R. loxensis*. We located the type material of these names at K and LD, so a lectotype is required for all of them (Art. 9.3 of the ICN). Romoleroux (1996) cited the holotypes of *R. macrocarpus* and *R. stipularis* at K, thus effectively typifying the names at that time (Art. 7.11); these type designations are here corrected to lectotypes.

We typify the other names cited here as synonyms of *R. nubigenus*, with the exception of *R. sneidernii*, whose holotype is at S (similar case as in *R. novogranatensis*). We designate *Lechler* 1997 at K as the lectotype of *R. lechlerii*, and *Weberbauer* 2281 as the lectotype of *R. andicola*. We located duplicates of Kuntze’s collections with his annotations in NY and US, and select specimen NY-429640 as the lectotype of *R. holtenii*, while the rest are treated here as original material.

Taxonomic notes. In addition to the previous synonyms for this name (Romoleroux 1996), we also consider *R. andicola*, *R. holtenii*, *R. lechleri* and *R. sneidernii* as synonyms of *R. nubigenus* and provide information on the typification of each name. The types of all these species have the same characters as the type of *R. nubigenus*: tomentose branches, orbicular stipules, trifoliate leaves, abaxial leaf surface tomentose to deeply tomentose, ovate sepals, acute or acuminate apex, mostly bi- or trifurcate, and fruits with numerous, small drupelets.

Original material of *Rubus holtenii* Kuntze: BOLIVIA. • Unknown: Santa Rosa, 2500 m, 1892, *O. Kuntze* s.n. (US-00097920 [image!]); 2500 m, 1–4 Apr 1892, *O. Kuntze* s.n. (NY-429639 [image!], US-00097919 [image!]).

Specimens examined. COLOMBIA. • **Magdalena:** Sierra Nevada de Santa Marta, 10°55.000'N, 73°57.000'W, 2500–2650 m, 04 Aug 1972 (fl), *J.H. Kirkbride, J. Forero & E. Forero* 1869 (US-03733525). **ECUADOR.** • **Imbabura:** Otavalo, vía a las lagunas de Mojanda, 00°09.267'N, 78°16.558'W, 3659 m, 24 Aug 2016, *D. Espinel-Ortiz, E. Bastidas & K. Romoleroux* 12 (QCA-243403). • **Chimborazo:** Penipe, entrada oeste, sendero al Volcán Altar, 01°37.852'S, 78°29.810'W, 3524 m, 27 Nov 2019 (fl), *D. Espinel-Ortiz & C. Restrepo* 197 (QCA-246102). **PERU.** • **Cusco:** Urubamba, Ollantaytambo, Garrapata, Pajonal, 13°04.950'S, 72°16.950'W, 3382 m, 25 Feb 2006 (fl, fr), *L. Valenzuela, J. Farfán, E. Suclli, I. Huamantupa & R. Ayerbe* 6339 (CUZ, USM-231079). • **Unknown:** *A. von Humboldt & M.A. Bonpland* 3088 (P-00162121). **BOLIVIA.** • **Santa Cruz:** Caballero. Laguna Brava, Cerro ponguillo, 17°47.892'N, 64°36.995'W, 2950–3085 m, 16 Apr 2003, *I.G. Vargas* 6893 (QCA- 92202).

Distribution. *Rubus nubigenus* is reported from the Andes of Colombia, Ecuador, Peru and Bolivia.

36. *Rubus organensis* Gardn., London J. Bot. 2: 342. 1843.

≡ *Rubus brasiliensis* var. *organensis* (Gardn.) Hook f., Fl. Bras. (Martius) 14(2): 62. 1867.

Type. BRAZIL. Organ Mountains [Serra dos Órgãos], 1836 (fl, fr), *G. Gardner* 372 (lectotype, designated here: K-000424883 [image!]).

Nomenclature notes. The name *R. organensis* has not been typified, probably because it was consistently treated as a synonym of *R. brasiliensis* [= *R. neobrasiliensis*] from the middle of the 19th century until recently (see *R. neobrasiliensis* notes) (Hooker 1867; Fuks 1984). Gardner (1843) cited number 372 from his personal collection in the protologue, and we found two specimens at K with this number on the label. However, although they refer to the same species and have the same collection number, they are different gatherings, collected in different years. According to Art. 9.4 of the ICN, we recognize both collections as original material examined by Gardner, and according to Art. 9.3, 9.11 and 9.12, we designate specimen K-000424883 as the lectotype of *R. organensis*. The other collection is treated here as original material.

Original material of *Rubus organensis* Gard.: BRAZIL. Organ Mountains, 1838 (fl), *G. Gardner* 372 (K-000424882 [image!]).

Specimens examined. BRAZIL. • **Paraná:** Prudentópolis, Relógio, 14 Apr 1964 (fl), *G. Hatschbach* 11167 (US-01351265). • **Santa Catarina:** Canoinhas, Ruderal, W of Canoinhas on the road to Porto União, 750 m, 17 Dec 1956 (fr), *L.B. Smith & P.R. Reitz* 8595 (US-01351269); 12 km N of Abelardo Luz, 26°32.000'S, 52°20.000'W, 900–1000 m, 08 Dec 1964 (fr), *L.B. Smith & R.M. Klein* 13862 (US-01351263); Caçador, Ruderal, W of Caçador on the road to Taquara Verde, 900–1000 m, 23 Dec 1956 (fr), *L.B. Smith & P.R. Reitz* 9096 (US-01351268). • **Minas Gerais:** Chacha Valley road, ca 2 km from Agricultural gate, 675 m, 21 May 1930 (fr), *Y. Mexia* 4730 (US-01351276).

Distribution. *Rubus organensis* is recorded in southern Brazil.

37. *Rubus paraguariensis* (Chodat & Hassl.) Basualdo & Zardini, *Candollea* 47 (Heft 2): 255. 1992.

≡ *Rubus hassleri* var. *paraguariensis* Chodat & Hassl., Bull. Herb. Boissier, ser. 2, 3: 799. 1903.

Type. PARAGUAY. San Pedro: “Jejui Guazu”, Sep 1899, *E. Hassler* 4618 (holotype: G-00640009 [image!]).

Distribution. The species is found in Paraguay.

38. *Rubus pendulus* Rusby, *Torreyia* 33 (2): 41. 1933.

Type. COLOMBIA. Huila: Balsillas, at Balsillas river, 2000–2100 m, 03–05 Aug 1917, *H.H. Rusby* & *F.W. Pennell* 719 (holotype: NY-429649 [image!]).

Specimens examined. VENEZUELA. • Táchira: Cabecera del Río Quinimarí, arriba de las Quebradas Las Copas, 2500–2630 m, 11 Jan 1968 (fl, fr), *J.A. Steyermark*, *G.C.K. Dunsterville* & *E. Dunsterville* 100727 (US-03733826, US-03733827). • **Yaracuy:** Sierra de Aroa, 9 km W of San Felipe, 10°21.000'N, 68°49.000'W, 900–1500 m, 5 Apr 1980 (fl), *R. Liesner* & *A. González* 10061 (MBM-91017). **COLOMBIA. • Huila:** Neiva, Vereda La Plata, Finca La Colonia (Antigua Carolina), 2000 m, 31 Oct 1996 (fl), *F. Llanos* & *W.F. Gerardino* 2797 (COL-000197900). **ECUADOR. • Pichincha:** Quito, Nanegalito, vía a San Tadeo, Área Protegida Privada Bellavista, 00°02.170'S, 78°42.067'W, 2297 m, 03 Dec 2021, *D. Espinel-Ortiz* & *H.G. Abad* 300 (QCA-244065, QCA-7010819 to QCA-7010822). **PERU. • Piura:** Huancabamba, Rosario Alto, Cerro Pan de Azúcar, 04°55.900'S, 79°18.700'W, 2250 m, 03 Aug 1988 (fl, fr), *C. Díaz* & *H. Osos* 3842 (USM-126985).

Distribution. *Rubus pendulus* is reported from the Andes of Venezuela, Colombia, Ecuador and Peru.

39. *Rubus peruvianus* Fritsch in Szyszyl., *Diss. Cl. Math.-Phys. Acad. Litt. Cracov.* 29: 220. 1894.

= *Rubus helioscopus* Focke, Bot. Jahrb. Syst. 54(1, Beibl. 117): 41. 1916, syn. nov. • Type. PERU. Ayacucho: Prov. Huanta, “Weg von Tambo über Osno zum Flusse Apurimac” [road from Tambo, via Osno, to river Apurimac], 3100–3400 m, 31 May 1910 (fl), *A. Weberbauer* 5580 (holotype: B-10-0248187 [image!]).

= *Rubus sparsiflorus* Focke ex J.F. Macbr., Publ. Field Mus. Nat. Hist., Bot. Ser. 8: 117. 1930, syn. nov. • Type. PERU. Huánaco: 9000 ft, 08–22 Jul 1922 (fl, fr), *J.F. Macbride* & *W. Featherstone* 1674 (holotype: F-V0041932F [image!]; isotype: B-10-0248176 [image!]).

= *Rubus bogotensis* subsp. *eglandulosus* Killip, J. Wash. Acad. Sci. 24(1): 47. 1934, syn. nov. • Type. COLOMBIA. Santander: Eastern slope of Páramo de Santurbán, toward Mutiscua, 3600–3900 m, 20 Feb 1927 (fl), *E.P. Killip* & *A.C. Smith* 19595 (holotype: US-00097864 [image!]; isotypes: A-40516 [image!], GH-40517 [image!]).

Type. PERU. Cutervo, May 1879, C. von Jelski 7 (lectotype, designated by Romoleroux 1996, pg. 34: KRA (n.v.)).

Nomenclature notes. The holotype of *Rubus sparsiflorus* is mounted together with a 5-foliolate leaf that belongs to a different species, which was not previously recognized and may have caused confusion with its identification.

Taxonomic notes. We recognize *R. helioscopus*, *R. sparsiflorus* and *R. bogotensis* subsp. *eglandulosus* as synonyms of *R. peruvianus*. The types of *R. helioscopus* and *R. sparsiflorus* have the same fruits with large and few drupelets as is typical of *R. peruvianus*. They also have the same villous indument without stipitate glands covering the whole plant. The type of *R. bogotensis* subsp. *eglandulosus* has no fruit, but the villous indument without stipitate glands, long and narrow stipule, trifoliate leaves, and ovate sepals are the same as in *R. peruvianus*.

Specimens examined. COLOMBIA. • **Santander:** Cordillera Oriental, páramo del Almorzadero, Peralonso, 3200 m, 19 Jul 1940 (fl), J. Cuatrecasas & H. García-Barriga 9926 (COL-000197246, US-03733276). **ECUADOR.** • **Azuay:** Vía Cuenca-Loja, a aprox. 500 m del desvío en la carretera E35, 03°14.208'S, 79°03.501'W, 3288 m, 13 Nov 2019, D. Espinel-Ortiz & E. Bastidas-León 181 (QCA-246055). **PERU.** • **Cajamarca:** Hualgayoc, entre Quishuarani y Lares, 06°45.680'S, 78°36.018'W, 3523 m, 27 May 2014 (fl), J. Montoya, E. Linares & A. Galán 3756 (USM-298276). **BOLIVIA.** • **La Paz:** Madidi, Apolobamba, Pelechuco-Río abajo, Santa Ana Ladera, 17°49.250'S, 69°04.017'W, 3547 m, 25 May 2009 (fl), V. Torrez 572 (QCA-209074).

Distribution. *Rubus peruvianus* is reported from the Andes of Colombia, southern Ecuador, Peru and Bolivia.

40. *Rubus radicans* Cav., Icon. 5: 7. 1799.

≡ *Comaropsis radicans* (Cav.) Ser., Prodr. [A. P. de Candolle] 2: 555. 1825.

Type. CHILE. “Ex San Carlos de Chiloé” [from San Carlos de Chiloé, now Ancud city], Feb (fl); L. Née 931 (lectotype, designated here: MA-01-00476192!).

Nomenclature notes. We recognize *R. radicans* as a distinct species (see *R. geoides* notes) and provide information on its typification. Cavanilles (1799) described *R. radicans* with collections from L. Née, before they were deposited at MA. Based on the common name “*Rubus frutilla*” mentioned in the protologue, we traced two specimens with different collection numbers: Née 768 and Née 931, which have a handwritten annotation of “*Rubus*” and “*frutilla*”, respectively. The lectotype has flowers and fruits, and a label with full details from the original publication. The other collection is treated as original material of the name.

Original material of *Rubus radicans* Cav.: Type. CHILE. “Ex San Carlos de Chiloé” [from San Carlos de Chiloé, now Ancud city], Feb (fl), L. Née 768 (MA-01-00476191!).

Specimens examined. BOLIVIA. • **Cochabamba:** Chapare, Abro de Colomi, 13500 ft, 16 Mar 1939 (fl, fr), E.K. Balls 6285 (US-00641905). **ARGENTINA.** • **Río Negro:** Puerto Blest, Nov 1926 (fl), R.C. Shannon & E.S. Shannon 20 (US-03733386). **CHILE.** • **Los Lagos:** Puerto Montt, Nov 1925 (fl, fr), F. Claude-Joseph 3294 (US-03733392). • **Los Ríos:** Valdivia, Panguipulli, 200 m, Oct 1926 (fl), P.A. Hollermayer 1393 (US-03733566, US-03733379, Z-282091). • **Unknown:** Quitratúe, F. Claude-Joseph 5870 (US-03733390); R.A. Phillippi 799 (US-03733388).

Distribution. *Rubus radicans* is reported from central Bolivia, southern Argentina and southern Chile.

41. *Rubus roseus* Poir., Encycl. [J. Lamarck & al.] 6(1): 245. 1804.

- = *Rubus rosiflorus* Hook., Icon. Pl. 1: t. 46 (XLVI). 1837 (as “*rosaeflorus*”), syn. nov. \equiv *Rubus roseus* var. *rosiflorus* (Hook.) Focke, Biblioth. Bot. 72: 36. 1910 (as “*rosaeflorus*”). • Type. ECUADOR. Pichincha: Woods on the western declivity of Pichincha, 9000 ft, W. Jameson 101 (holotype: K-000424926 [image!]).
- = *Rubus santarosensis* Kuntze, Revis. Gen. Pl. 3[3]: 80. 1898, syn. nov. \equiv *Rubus roseus* var. *santarosensis* (Ktze.) J.F. Macbr., Publ. Field Mus. Nat. Hist., Bot. Ser. 8: 118. 1930. • Type. BOLIVIA. Santa Rosa, 3000 m, 01–04 Apr 1892 (fr), O. Kuntze s.n. (lectotype, designated here: NY-429655 [image!]).
- = *Rubus lloensis* Benoist, Bull. Soc. Bot. France 81(2): 325. 1934. • Type. ECUADOR. Pichincha: Palmira, 12 Feb 1931 (fl), R. Benoist 3842 (lectotype, designated by Romoleroux 1996, pg. 19: P-00162127 [image!], isolectotype: P-00162128 [image!]).
- = *Rubus nubigenus* var. *subinermis* Benoist, Bull. Soc. Bot. France 90: 15. 1943, syn. nov. • Type. ECUADOR. [Pichincha]: “Pentes orientales du Mojanda” [in western slopes of Mojanda], 03 Mar 1931 (fl), R. Benoist 4000 (holotype: P-03145738 [image!]).

Type. PERU. *J. Dombey* s.n. (holotype: P-00678395 [image!]).

Nomenclature notes. The situation of the typification of *R. roseus* is similar to that of *R. coriaceus*, where Poirlet (1804) cited a collection from the Jussieu Herbarium. We found one specimen with a label from the “Herbier D’Antoine Laurent de Jussieu” at P, and according to Art. 9.1 of the ICN, we recognize it as the holotype of *R. roseus*. This change immediately supersedes (Art. 9.19) the previous typification by Romoleroux (1996). We treated further specimens of *R. roseus* at P as possible original material.

We found original material of *R. santarosensis* at NY, similar to the case of *R. holtenii* (see notes on *R. nubigenus*). According to Art. 9.3, 9.11 and 9.12, we select collection NY-429655 as the lectotype of *R. santarosensis* because it has the locality information corresponding to the protologue. The other specimen is treated here as possible original material of the name.

Taxonomic notes. In addition to the previous synonyms for this name (Romoleroux 1996; Romoleroux et al. 2014), we also consider *R. nubigenus* var. *subinermis*, *R. rosiflorus*, and *R. santarosensis* as synonyms of *R. roseus*. The types of all these taxa have glabrous branches, stipules, petioles and leaves, broadly ovate to auriculate, reflexed stipules, trifoliolate leaves, ovate sepals, with long-acuminate apex, mostly bi- or trifurcate, and fruits with numerous, small drupelets like the type of *R. roseus*.

Possible original material of *Rubus roseus* Poir.: PERU. *J. Dombey* s.n. (P-00162129 [image!]).

Possible original material of *Rubus santarosensis* Kuntze: BOLIVIA. 3000 m, 01–04 Apr 1892 (fr), O. Kuntze s.n. (NY-429654 [image!]).

Specimens examined. VENEZUELA. • **Táchira:** Cabeceras del Río Quinimarí, entre el pie del peñasco de la Peña de Pata de Judío, 2500–2800 m, 12 Jan 1968 (fl), J.A. Steyermark, G.C.K. Dunsterville & E. Dunsterville 100819 (US-03733585, US-03733586). **COLOMBIA.** • **Cauca:** Cordillera Central, Páramo de Juntas, 3300 m, 13 Oct 1961 (fl, fr), J. Cuatrecasas & L. Willard 26437 (COL-000197689). **ECUADOR.** • **Napo:** Parque Nacional Llanganates, vía Salcedo-Tena, 00°59.450'S, 78°17.950'W, 3233 m, 22 Feb 2015 (fl, fr), Á.J. Pérez, N. Zapata & W. Santillán 8247 (QCA-234720). **PERU.** • **Piura:** Huancabamba, Carmen de la Frontera, quebrada Rosarios, 04°59.153'S, 79°22.815'W, 2300–2600 m, 22 May 2003 (fl, fr), S.M. Baldeón-Malpartida & F. Neyra-Jiménez 5406 (USM-273409). **BOLIVIA.** • **La Paz:** Murillo, valle de Río Zongo, 16°08.000'S, 68°07.000'W, 2750 m, 08 Jan 1988 (fl, fr), F. Grifo & J. Solomon 642 (QCA-92257). • **Cochabamba:** Ayopaya, Silapata, 2700 m, Dec 1935 (fr), M. Cárdenas 3377 (US-00641907).

Distribution. *Rubus roseus* is reported from the Andes of Venezuela, Colombia, Ecuador, Peru and Bolivia.

42. *Rubus ruizii* Focke, Abh. Naturwiss. Vereins Bremen 4: 162. 1874.

≡ *Rubus nubigenus* var. *ruizii* (Focke) Focke, Biblioth. Bot. 72: 37. 1910.

= *Rubus weberbaueri* Focke, Biblioth. Bot. 72: 38. 1910, syn. nov. • Type. PERU. Huánuco: Huamalíes, “Berge südwestlich von Monzon” [mountains southwest of Monzon], 3200–3300 m, 12 Jun 1903 (fl, fr), A. Weberbauer 3362 (holotype: B-10-0248171 [image!]).

Type. PERU. H. Ruiz 19/65 (neotype, designated here: MA-01-00812077!).

Nomenclature notes. The holotype of *R. ruizii* at B was destroyed in WWII, but we found two specimens at MA, previously annotated by F. Bolle as *R. nubigenus* var. *ruizii*. The photograph of the holotype of *R. ruizii* at F allowed us to confirm the identity of the two specimens at MA as *R. ruizii*. We select specimen Ruiz 19/65 as the neotype of *R. ruizii* according to Art. 9.8 of the ICN.

Taxonomic notes. Although Focke (1874) described *R. ruizii*, he later considered it as a variety of *R. nubigenus* (Focke 1910). However, considering the neotype, it differs from *R. nubigenus* by: grayish-tomentose branches with abundant, short prickles; narrow leaves and leaflets; whitish-tomentose leaf abaxial surface; and unarmed sepals. These are characters of *R. weberbaueri* Focke, and it is clear that they refer to the same species. As *R. ruizii* is the oldest legitimate name available, it should be used for the taxon (Art. 11).

Photograph of original material of *Rubus ruizii* Focke: PERU. Pillao, H. Ruiz 206 (F [image!]).

Specimens examined. PERU. • **San Martín:** Mariscal Cáceres, Distrito Huicungo, valle de Allpamachay, Cueva del Oso en la intersección de Vacas Blancas y Allpamachay, 07°58.628'S, 77°21.323'W, 3518 m, 25 Jun 2010 (fl), B. León 5609 (USM-243308). • **Unknown:** Tambo Real, H. Ruiz 19/64 (MA-01-00812078). **BOLIVIA.** • **La Paz:** Nor Yungas, Unduavi, 3300 m, Nov 1910 (fl, fr), O. Buchtien 2858 (US-00641913). Yungas, 6000 ft, 1885 (fr), H.H. Rusby 471 (NY-429650).

Distribution. *Rubus ruizii* is distributed in the Andes of southern Peru and Bolivia.

43. *Rubus rusbyi* Britton, Bull. Torrey Bot. Club 17(1): 10. 1890.

Type. BOLIVIA. La Paz: Unduavi, 10000 ft., Oct 1885 (fl), *H.H. Rusby* 2508 (holotype: NY-429653 [image!]).

Specimens examined. PERU. • Pasco: Oxapampa, Huancabamba, Parque Nacional Yanachaga-Chemillen, sector San Daniel, 10°25.767'S, 75°26.100'W, 3250–3450 m, 01 Mar 2008 (fl), *R. Vásquez, A. Monteagudo, A. Peña & J. Mateo* 33855 (USM-235919). • **Cusco:** Paucartambo, Tres Cruces, Parque Nacional Manu, 3600–3700 m, 06 Mar 1991 (fl, fr), *A. Cano* 4589 (USM-243308).

Distribution. *Rubus rusbyi* is known from the Andes of southern Peru and Bolivia. We report here the presence of *R. rusbyi* for the first time in Peru.

44. *Rubus schottii* Pohl ex Focke, Abh. Naturwiss. Vereins Bremen 4: 157. 1874.

Type. BRAZIL. *Schott* 5885 (lectotype, designated here: W-279047 [image!]; isolectotype: W-279046 [image!], W-279048 [image!]).

Nomenclature notes. Focke (1874) cited *Schott* 5885 from two herbaria, thus a lectotype is required (Art. 9.3 of the ICN). Therefore, according to Art. 9.3, 9.11 and 9.12, we designate the collection W-279047 as the lectotype of *Rubus schottii* because it has fruits and shows the abaxial surface of a mature leaf.

Specimens examined. BRAZIL. • Minas Gerais: Caparaó, 24 Oct 1989 (fl), *R. Simao-Bianchini, J.R. Pirani, R. Mello-Silva & J.B. Fernandes* 237 (SPF-68142). • **Espírito Santo:** Conceição do Castelo, Alto Bananal, 120 m, 22 Aug 1987 (fl), *G. Hatschbach & A.C. Cervi* 51315 (MBM-120266).

Distribution. *Rubus schottii* is reported from southern Brazil.

45. *Rubus sellowii* Cham. & Schldl., Linnaea 2(1): 15. 1827.

Type. BRAZIL. *Brasilia meridionalis*, *Sellow* s.n. (lectotype, designated here: B-10-0248177 [image!]; isolectotype: HAL-98247 [image!]).

Nomenclature notes. *Rubus sellowii* requires a lectotype (Art. 9.3 of the ICN) because Schlechtendal and Chamisso (1827) cited two Sellow collections, from “*Brasilia meridionalis*” and “Montevideo” respectively. We located two specimens from “*Brasilia meridionalis*” in B and HAL. According to Art. 9.3, 9.11 and 9.12, we designate the specimen at B as the lectotype of *R. sellowii*, since it has the 5-foliolate leaf mentioned in the protologue.

Specimens examined. ARGENTINA. • Misiones: Posadas, Nov 1907 (fl), *E.L. Ekman* 1867 (US-03733713). **PARAGUAY. • [Guairá]:** Villarrica, *P. Jörgensen* 3860 (US-03733711). **BRAZIL. • Santa Catarina:** Itapiranga, 4 km W of Popí, 200–350 m, 24 Feb 1957 (fl, fr), *L.B. Smith, R. Klein & J. Schnorrenberger* 11766 (US-01351366).

Distribution. *Rubus sellowii* is reported in Argentina, Paraguay and southern Brazil.

46. *Rubus urticifolius* Poir., Encycl. [J. Lamarck & al.] 6(1): 246. 1804 (as “*urticaefolius*”).

- ≡ *Dyctisperma urticifolius* (Poir.) Raf., Sylva Tellur.: 160. 1838. ≡ “*Rubus urticifolius* var. *typicus* Focke”, Biblioth. Bot. 18, Heft 83: 56. 1914, nom. inval.
 = *Rubus trichomallus* Schltldl., Linnaea 13(2): 268. 1839. • Type. MEXICO. Hacienda de la Laguna, Aug 1829 (fr), C.J.W. Schiede s.n. (lectotype, designated here: HAL-60486 [image!]).
 = *Rubus hassleri* Chodat, Bull. Herb. Boissier 7, App. 1: 66. 1899. ≡ *Rubus urticifolius* var. *hassleri* (Chodat) Focke, Biblioth. Bot. 18, Heft 83: 55. 1914. • Type. PARAGUAY. Feb 1885–1895 (fl, fr), E. Hassler 1901 (lectotype, designated here: G-00640010 [image!] two sheets, isoelectotypes: BM-000548793 [image!], P-682374 [image!]).

Type. PERU. *J. Dombey* s.n. (holotype: P-00678396 [image!]).

Nomenclature notes. The situation of the typification of *R. urticifolius* is similar to that of *R. coriaceus* and *R. coriaceus*, where Poiret (1804) cited a collection from the Jussieu Herbarium. Therefore, according to Art. 9.1 of the ICN, we recognize the only collection of *R. urticifolius* with a label from the “Herbier D’Antoine Laurent de Jussieu” at P as the holotype of *R. urticifolius*. We treat further specimens from P as possible original material, and provide information on the typification of previous synonyms of this name.

The original material of *R. trichomallus* is at HAL (Braun and Wittig 2003), with two sheets annotated with this name. We select HAL-60486 as the lectotype of *R. trichomallus* (Art. 9.3, 9.11 and 9.12 of the ICN), while the other specimen is treated here as original material. Chodat (1899) did not cite any specimen in the protologue, but we traced back *Hassler 1901* which corresponds to the original description. We therefore designate the specimen at G as the lectotype of *R. hasslerii* (Art. 9.3, 9.11 and 9.12).

Taxonomic notes. The synonymy follows the revision of Fuks (1984).

Original material of *Rubus urticifolius* Poir.: PERU. *J. Dombey* s.n. (P-00162125 [image!]); Lima, *J. Dombey* s.n. (P-00162123 [image!], P-00162124 [image!], P-00162126 [image!]).

Original material of *Rubus trichomallus* Schltldl.: MEXICO. Hacienda de la Laguna, Aug 1829 (fr), C.J.W. Schiede s.n. (HAL-107627 [image!]).

Specimens examined. VENEZUELA. • **Bolívar:** Río Anawaray-parú, vecindades del km 134 y campamento 134 al sur de El Dorado, 1300–1350 m, 25 Dec 1970 (fl, fr), J.A. Steyermark, G.C.K. Dunsterville & E. Dunsterville (US-03733792). **COLOMBIA.** • **Valle del Cauca:** Río Digua Valley, between La Elsa and Río Blanco, 900 m, 2–5 Apr 1939 (fl, fr), E.P. Killip (US-03733754). **ECUADOR.** • **Pichincha:** Quito, Nono, vía Nono-Tandayapa entre km 117–118, 00°01.967'S, 78°38.491'W, 1925 m, 26 Jul 2021 (fl, fr), D. Espinel-Ortiz & H.G. Abad 279 (QCA-244015, QCA-7010801, QCA-7010802). **PERU.** • **Cajamarca:** San Ignacio, Huarango, El Convento, 05°13.000'S, 78°40.000'W, 1200–1600 m, 01 Jul 1996 (fl, fr), J. Campos & E. Rodríguez 2836 (HUT-45736, USM-143879). **ARGENTINA.** • **Misiones:** Posadas, “La Granja”, 14 Jan 1908, E.L. Ekman 1873 (US-03733815). **Paraguay.** • **Itapúa:** Opposite Puerto Piray, 200 m, 23 Oct 1978 (fl, fr), S.A. Renvoize 3215 (P-03340708, US-03733811). **BRAZIL.** • **Bahía:** Piatã, proximidades do riacho

Toborou, 13°09.550'S, 41°45.917'W, 1060 m, 04 Nov 1996 (fl, fr), *D.J.N. Hind, H.P. Bautista, M.M. da Silva & L.P. de Queiroz* 4042 (US-01351270).

Distribution. *Rubus urticifolius* ranges from northern Central America across most of South America, from 200–2500 m asl.

Excluded names

a. *Rubus adenomallus* var. *larecajanus* Focke, *Biblioth. Bot.* 18, Heft 83: 52. 1914.

Type. BOLIVIA. [La-Paz]: Larecaja “viciniis Sorata, inter Laripata et monticulus Pancuasi” [near Sorata, between Laripata and small mountain Pancuasi], 2700–3100 m, Aug (fl, fr) 1859, *G. Mandon* 658 (lectotype, designated here: K-000424915 [image!], isolectotype: BR-33828565 [image!]).

Notes. Focke (1914) cited two gatherings in the protologue: *Mandon* 657 and *Mandon* 658. We found these specimens at K and BR. However, only *Mandon* 658 matches the description based on the glands in the branches, while *Mandon* 657 corresponds to *R. megalococcus*. Therefore, we designate *Mandon* 658 at K as the lectotype of this name (Art. 9.3, 9.11 and 9.12 of the ICN).

It is possible that *R. adenomallus* var. *larecajanus* is related to *R. megalococcus*, *R. bogotensis* or *R. adenothallus*. *Mandon* 658 has abundant glands on the branches and leaves, which is a character of *R. bogotensis* and *R. adenothallus*. However, the shape and size of the leaves are similar to those of *R. adenothallus* and *R. megalococcus*, but the fruits with few, big drupelets are a character of *R. megalococcus* and *R. bogotensis*. Further studies are therefore required to clarify the identity of *R. adenomallus* var. *larecajanus*.

b. *Rubus aenigmaticus* Focke, *Meded. Rijks-Herb.* 19: 55. 1913.

Type. BOLIVIA. No collection was cited by Focke (Herzog 1913).

Notes. Focke (Herzog 1913) described this taxon as a possible hybrid of *R. brierus* and *R. buchtienii* [= *R. megalococcus*]. He did not cite any specific collection, just that it was collected by Buchtien. We could not locate any specimen annotated by Focke, thus its identity is currently unclear.

c. *Rubus eriocarpus* Liebm., *Vidensk. Meddel. Naturhist. Foren. Kjøbenhavn* 1852: 162. 1853.

≡ *Rubus occidentalis* subsp. *eriocarpus* (Liebm.) Focke, *Abh. Naturwiss. Vereins Bremen* 4: 147. 1875.

Type. Mexico. Puebla: Chinautla, 7000 ft, Jun (fl), *Liebmann s.n.* (syntype); Vulcanen Orizaba, 10000 ft, Sep (fl), *Liebmann s.n.* (syntype). **Oaxaca:** Cerro de Sempoaltepec, 8000–10000 ft, Jun (fr), *Liebmann s.n.* (syntype). **Unknown:** Jalapa, May, *Schiede s.n.* (syntype); Jalapa, Sep, *Lerma s.n.* (syntype); Mineral del Monte, *Ehrenberg s.n.* (syntype).

Notes. Tropicos.org (2024) treated *R. glaucus* as a synonym of *R. eriocarpus*, but we omitted the latter from the checklist as *R. glaucus* and *R. eriocarpus* may be different species (Carter et al. 2019; Huang et al. 2023; IPNI 2024; POWO 2024). The aim of this checklist was the South American species of *Rubus*, but *R. eriocarpus* was described from Mexico. Whether or not they are synonyms, the accepted name of the species in South America is *R. glaucus*. If *R. glaucus* and *R. eriocarpus* are synonyms, the name *R. glaucus* has priority over *R. eriocarpus* (Art. 11 of the ICN).

d. *Rubus loxensis* f. *parvifolius* Kuntze, Meth. Sp.-Besch. Rubus: 117. 1879.

Type. Neu Granada, J. Goudot s.n. (holotype).

Notes. Kuntze (1879) cited a specimen collected by Goudot, previously identified as *R. loxensis*, at P. However, we were unable to locate any specimen annotated by Kuntze, or with this locality and identification. Based on the description, this name could be a synonym of *R. nubigenus* or *R. coriaceus*. The name needs to be typified to clarify its identity.

e. *Rubus porphyromallos* Focke, Repert. Spec. Nov. Regni Veg. 9: 235. 1911.

Type. “Andibus partis borealis America australis”. No collection was cited by Focke (1911a).

Notes. Focke (1911a, 1911b) cited no collections for this name, just mentioned that it is similar to *R. bogotensis* and occurs in the North Andes of South America. We could not locate any specimens annotated by Focke, thus the identity of *R. porphyromallos* is currently unclear. It may refer to a specimen similar or related to *R. pendulus* (Espinel-Ortiz et al. 2023).

f. *Rubus schottii* var. *pohlianus* Focke, Abh. Naturwiss. Vereins Bremen 4: 158. 1874.

Type. BRAZIL. Matto Grosso: “In silva Matto grosso”, Cap Goyaz, J.P.E. Pohl 1093 (holotype: W-279045 [image!]).

Notes. Focke (1874) cited Pohl 1093 at W in the protologue, thus according to Art. 9.1 of the ICN, we recognize this specimen as the holotype of *R. schottii* var. *pohlianus*. We require further studies to clarify the identity of this name.

g. *Rubus urticifolius* var. *rosiflorus* Vargas, Revista Univ. (Cuzco) 32(84): 266. 1943 (as “rosaeflorus”).

Type. PERU. Cusco: Convención, valle de Lucumayo, Amaibamba, 1900 m, 27 Jul 1943, C. Vargas 3433 (holotype: CUZ-5585!; isotype: CUZ-5589!).

Notes. We require further studies to clarify the identity of this name.

Conclusions

In this checklist, we recognized 46 species of *Rubus* from 110 names based on South American specimens published since 1767. Approximately 90% were published before 1990, when no holotype was required for a valid publication. As a result, 51 names required typification. Adams (Cafferty and Jarvis 2002), Fuks (1984) and Romoleroux (1996) typified 22 names, and we designated 22 lectotypes, 4 neotypes and 1 epitype. In addition, after careful examination, we proposed new synonyms explaining the reasoning behind each one and reported *R. azuayensis*, *R. laegaardii* and *R. rusbyi* for the first time from Peru. Some major changes introduced here were the restoration of *R. organensis* as a distinct species, the new name *R. neobrasiliensis* that replaced *R. brasiliensis* and the typification of *R. mollifrons* and *R. ruizii*. All in one, this annotated list will be the basis for future studies of *Rubus* in South America, especially monographic and evolutionary approaches, as well as catalogs or other disciplines that want to study *Rubus*.

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Additional information

Conflict of interest

The authors have declared that no competing interests exist.

Ethical statement

No ethical statement was reported.

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Author contributions

Concept idea MW and DAE0; herbaria and literature revision DAE0 and KR, first draft DAE0; editing and writing of the manuscript all authors; funding DAE0, MW.

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Data availability

All of the data that support the findings of this study are available in the main text or Supplementary Information.

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Supplementary material 1

Summary of accepted species of *Rubus* from South America, available names and their types

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Data type: xlsx

Explanation note: Excel with three sheets summarizing the available names of *Rubus* from South America, their types and the valid species presented in the checklist. Each sheet is named after the information it contains. For example, the sheet "types" contains the hyperlinks to the respective online herbarium samples that are treated as types.

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